

THE TECHNOLOGY REVIEW

RELATING TO THE MASSA-
CHUSETTS INSTITUTE
OF TECHNOLOGY



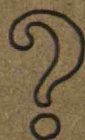
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Term expires January, 1918.

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- Cleveland**—Luncheon—Tuesdays from 12.00 to 2.00 p. m. at the Metropole Hotel, Walnut Street, above Sixth.
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- Louisville**—TECHNOLOGY CLUB OF LOUISVILLE, L. S. Streng ('98), Secretary, Louisville Gas & Electric Co., 311 West Chestnut Street, Louisville, Ky.
- Manchester**—TECHNOLOGY CLUB OF NEW HAMPSHIRE, Walter D. Davol ('06), Secretary-Treasurer, Amoskeag Bank Bldg., Manchester, N. H.
- Milwaukee**—TECHNOLOGY CLUB OF MILWAUKEE, Mitchell Mackie ('05), Secretary, Commercial Auto Co., Milwaukee, Wis.
- Milwaukee**—Luncheon—Every Thursday noon at the University Club.

Minneapolis—TECHNOLOGY ASSOCIATION OF MINNESOTA, DeW. C. Ruff ('07), Secretary, 502 Plymouth Bldg., Minneapolis, Minn.

Montreal—TECHNOLOGY CLUB OF LOWER CANADA, E. B. Evans ('06), Secretary, 357 St. Catherine Street, W., Montreal, Canada.

New Bedford—TECHNOLOGY CLUB OF NEW BEDFORD, Richard D. Chase ('92), Secretary-Treasurer, 607 Purchase Street, New Bedford, Mass.

New Orleans—TECHNOLOGY CLUB OF THE SOUTH, J. H. O'Neil ('10), State Board of Health, New Orleans, La.

New York—TECHNOLOGY CLUB OF NEW YORK, 17 Gramercy Park, Ralph H. Howes ('03), Secretary, 105 West 40th Street, New York, N. Y.

Philadelphia—TECHNOLOGY CLUB OF PHILADELPHIA, C. J. Walton ('14), Secretary, 1230 Arch Street, Philadelphia, Pa.

Pittsburgh—PITTSBURGH ASSOCIATION M. I. T., Harry A. Rapelye ('08), Secretary, 2123 Oliver Bldg., Pittsburgh, Pa.

Pittsfield—BERKSHIRE COUNTY ALUMNI ASSOCIATION OF M. I. T., Earl E. Ferry ('12), Secretary, 40 Center Street, Pittsfield, Mass.

Portland—TECHNOLOGY ASSOCIATION OF OREGON, John G. Kelly, Jr. ('14), Secretary-Treasurer, 711 Pittock Block, Portland, Ore.

~~43~~ Luncheon—Every noon at the Hazelwood Lunch, Portland, Ore.

Providence—TECHNOLOGY CLUB OF RHODE ISLAND, Clarence L. Hussey ('08), Secretary, Fruit Hill, 1547 Smith Street, Providence, R. I.

Rochester—TECHNOLOGY CLUB OF ROCHESTER, W. G. Bent ('05), Secretary, Kodak Park Wks., Rochester, N. Y.

St. Louis—ST. LOUIS SOCIETY OF THE M. I. T., Amasa M. Holcombe ('04), Secretary-Treasurer, care of Carr & Carr, 510 Pine Street, St. Louis, Mo.

Salt Lake City—INTERMOUNTAIN TECHNOLOGY ASSOCIATION, Walter H. Trask, Jr. ('06), Secretary-Treasurer, University Club, Salt Lake City, Utah.

San Francisco—TECHNOLOGY ASSOCIATION OF NORTHERN CALIFORNIA, Headquarters, Eaton Laboratories, 444 Market Street, San Francisco, Cal., George E. Atkins ('04), Secretary, Hobart Bldg., San Francisco, Cal.

~~43~~ Luncheon—Second Tuesday of each month at The Engineers Club, 61 Post Street, San Francisco, Cal.

Seattle—TECHNOLOGY CLUB OF PUGET SOUND, Joseph Daniels ('05), Secretary-Treasurer, 5511 University Boulevard, Seattle, Wash., Tech Headquarters—Anderson Supply Co., 111 Cherry Street.

~~43~~ Luncheon—Third Friday of each month at 12.15 at the Commercial Club, 2d Avenue and Union Street, Seattle, Wash.

Spokane—INLAND EMPIRE ASSOCIATION OF THE M. I. T., Philip F. Kennedy ('07), Secretary, 1129 Hamilton Street, Spokane, Wash.

Springfield—TECHNOLOGY CLUB OF SPRINGFIELD, George W. Hayden ('95), Secretary-Treasurer, 283 Worthington Street, Springfield, Mass.

Syracuse—M. I. T. CLUB OF CENTRAL NEW YORK, James R. Vedder ('07), Secretary, 704 Sedgwick, Andrews & Kennedy Bldg., Syracuse, N. Y.

Urbana—TECH CLUB OF THE UNIVERSITY OF ILLINOIS, E. A. Holbrook ('04), Secretary, 915 W. Green St., Urbana, Ill.

Washington—WASHINGTON SOCIETY OF THE M. I. T., F. C. Starr ('05), Secretary, Wilkins Bldg., Washington, D. C.

Worcester—TECHNOLOGY ASSOCIATION OF WORCESTER COUNTY, Louis E. Vaughan ('02), Secretary-Treasurer, 4 Fenimore Road, Worcester, Mass.

FIXED LUNCHEONS

Akron—M. I. T. Club of Akron, Ohio, at the University Club, first Saturday of the month.

Atlanta—Atlanta Association of M. I. T., at Hotel Ansley Rathskeller, Saturdays, at 1 p. m.

Birmingham—Southwestern Technology Association, First Wednesday of month at 1 o'clock at the Hillman.

Buffalo—Technology Club of Buffalo, Chamber of Com., on first Thursday of month at 12.30.

Chicago—Northwestern Association of M. I. T., Engineers Club, Tuesdays at 12.30 p. m.

Cincinnati—Cincinnati M. I. T. Club at the Metropole Hotel, Walnut Street, above Sixth, Tuesdays from 12.00 to 2.00 p. m.

Dayton—Dayton Technology Club, Fridays, at 12.15 at the Dayton Engineers Club.

Denver—Rocky Mountain Technology Club, Wednesdays, from 12.30–1.30 p. m. at Colorado Electric Club, Chamber of Commerce Bldg., Denver, Col.

Detroit—Detroit Technology Association, First Wednesday of each month at 12.30 at the Detroit Board of Commerce.

Indianapolis—15th day of each month at the University Club.

Los Angeles—Technology Club of Southern California, at the University Club, on the first Wednesday of each month.

Milwaukee—Technology Club of Milwaukee every Thursday noon at the University Club.

Portland—Technology Association of Oregon. Every noon at the Hazelwood Lunch.

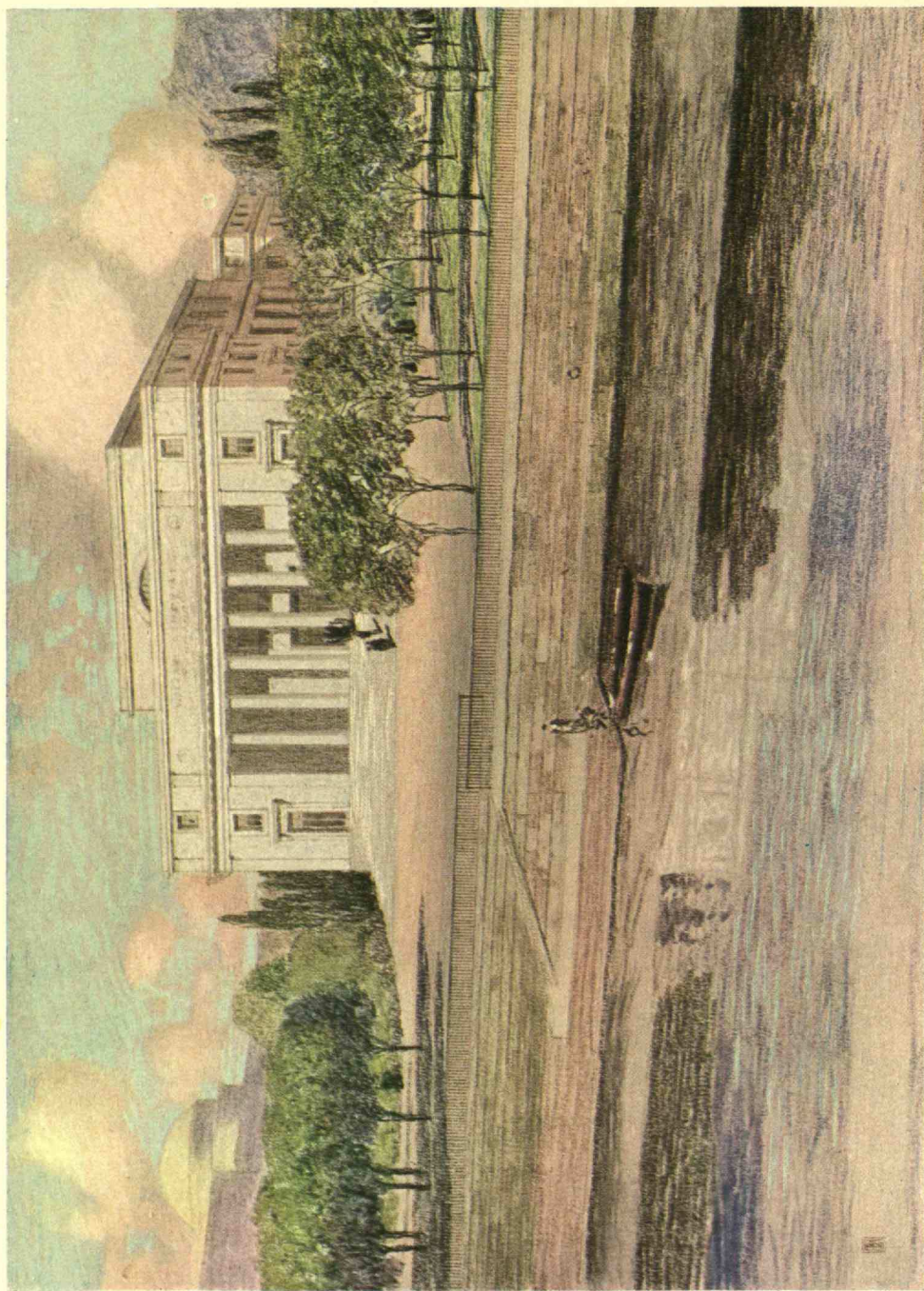
San Francisco—Technology Association of Northern California, at the Engineers Club, 61 Post Street, second Tuesday of each month.

Seattle—Technology Club of Puget Sound, third Friday of each month at 12.15 at the Commercial Club, 2d Avenue and Union Street, Seattle.

Shanghai—Technology Club of China. First Saturday of the month, at 12.30, at the Carlton.

SUSTAINING MEMBERS OF THE ALUMNI ASSOCIATION

- A. H. Abbott, '07
 Edward A. Adams, '69
 Louis W. Adams, '03
 A. C. Anthony, '86
 C. B. Appleton, '84
 C. M. Baker, '78
 David Baker, '85
 J. C. T. Baldwin, '88
 S. Bartlett, '90
 William H. Bassett, '91
 R. H. Beattie, '93
 A. F. Bemis, '93
 William L. Benedict, '80
 E. M. Berliner, '06
 Warren I. Bickford, '01
 Willard G. Bixby, '89
 Otto B. Blackwell, '06
 Zenas W. Bliss, '89
 Howard L. Bodwell, '98
 Philip D. Borden, '73
 William W. Bosworth, '89
 James C. Boyd, '93
 Henry G. Bradlee, '91
 S. Parker Bremer, '93
 Dickson Q. Brown, '98
 Frank A. Browne, '06
 Julian Cameron, '87
 George H. Capen, '83
 George O. Carpenter, '73
 John P. Chadwick, '07
 Frank Cheney, Jr., '82
 George E. Clafin, '88
 Eugene H. Clapp, '95
 F. W. Clark, '80
 Arthur A. Clement, '94
 Samuel P. Colt, '74
 Whitney Conant, '68
 F. L. Connable, '93
 William D. Coolidge, '96
 Joseph W. Crowell, '04
 Edward Cunningham, '91
 H. J. Cutler, '81
 Herbert Dabney, '75
 Jere R. Daniell, '97
 Daniel J. Danker, '15
 William C. Dart, '91
 Carleton E. Davis, '93
 Herbert N. Dawes, '93
 George C. Dempsey, '88
 Richard Devins, '88
 Edward H. Dewson, '85
 Parker Dodge, '07
 Franklin W. Doliber, '97
 George A. Draper, '76
 Henry W. Dun, Jr., '08
 Coleman du Pont, '84
 Irene du Pont, '97
 Lamont du Pont, '01
 Pierre S. du Pont, '90
 Nathan Durfee, '89
 Charles W. Eaton, '85
 Sumner B. Ely, '92
 Lewis Emery, '00
 Augustus H. Eustis, '03
 Frederic H. Fay, '93
 S. M. Felton, '73
 James I. Finnie, '09
 Arthur B. Foote, '99
 T. A. Foque, '88
 E. D. A. Frank, '06
 E. V. French, '89
- George L. Gilmore, '90
 C. W. Goodale, '75
 George E. Hale, '90
 George W. Hamilton, '80
 Francis R. Hart, '89
 J. H. Haste, '96
 Charles Hayden, '90
 Edmund Hayes, '73
 John B. Henck, '76
 Albert S. Heywood, '92
 E. Bruce Hill, '05
 Franklin W. Hobbs, '89
 Elliot Holbrook, '74
 F. C. Holmes, '92
 Arthur T. Hopkins, '97
 Charles F. Hopewell, '94
 Henry J. Horn, '88
 Ethan H. Howard, '97
 Henry Howard, '89
 William E. Hoyt, '68
 Charles W. Hubbard, '76
 S. K. Humphrey, '98
 E. Lawrence Hurd, '95
 Edward H. Huxley, '95
 George T. Jarvis, '84
 C. H. Johnston, '80
 Theodore Jones, '86
 Clarence M. Joyce, '03
 William R. Kales, '92
 C. W. Kellogg, '02
 W. J. Knapp, '06
 William H. Lawrence, '91
 E. H. Laws, '96
 Francis M. Learned, '76
 John H. Leavell, '07
 Clifford M. Leonard, '00
 Theodore J. Lewis, '76
 Richard W. Lodge, '79
 Frank W. Lovejoy, '94
 George H. Lukes, '92
 Joseph B. Lukes, '92
 W. E. McCaw, '92
 Alexander G. McKenna, '91
 Peter F. McLaughlin, '08
 Charles T. Main, '76
 Henry C. Marcus, '01
 Austin B. Mason, '10
 Sampson D. Mason, '70
 George H. May, '92
 George H. Mead, '00
 William H. Merrill, '89
 Frederick Metcalf, '90
 Leonard Metcalf, '92
 A. L. Mills, '76
 Miss Susan Minns, '81
 Henry A. Morss, '93
 P. A. Mosman, '87
 George A. Mower, '81
 William J. Mullins, '85
 James P. Munroe, '82
 C. L. Norton, '93
 Atwood C. Page, '10
 Frank H. Page, '85
 William B. Page, '93
 William I. Palmer, '91
 F. A. Park, '95
 J. Scott Parrish, '92
 Frank E. Peabody, '77
 Eugene E. Pettee, '92
 W. E. Piper, '94
 E. C. Potter, '80
- William A. Prentiss, '75
 R. B. Price, '94
 E. B. Raymond, '90
 Daniel W. Richards, '94
 F. B. Richards, '84
 R. H. Richards, '68
 Thomas G. Richards, '94
 Charles W. Ricker, '91
 Russell Robb, '88
 Odin Roberts, '88
 Richard A. Robertson, '78
 C. S. Robinson, '84
 Dwight P. Robinson, '92
 T. W. Robinson, '84
 Allen H. Rogers, '90
 E. W. Rollins, '71
 James W. Rollins, '78
 Montgomery Rollins, '89
 Henry F. Ross, '82
 John C. Runkle, '88
 Norman F. Rutherford, '96
 William E. Sawtelle, '99
 A. H. Sawyer, '88
 Schuyler Schieffelin, '90
 Richard E. Schmidt, '87
 George O. Schneller, '00
 Lewis J. Seidensticker, '98
 A. Forrest Shattuck, '91
 John L. Shortall, '87
 Ivar L. Sjoestrom, '88
 Frank N. Smalley, '96
 Joseph Cooke Smith, '88
 F. A. Smythe, '89
 Walter B. Snow, '82
 William G. Snow, '88
 Frank G. Stantial, '79
 G. Franklin Starbuck, '97
 William C. Stearns, '71
 William S. Stearns, '79
 Charles A. Stone, '88
 Frederick W. Swanton, '90
 Gerard Swope, '95
 H. P. Talbot, '85
 John J. Thomas, '07
 Sturgis H. Thorndike, '95
 J. H. Towne, '90
 Walter D. Townsend, '76
 Henry H. Tozier, '96
 Leonard Tufts, '94
 LeBaron Turner, '05
 W. Lyman Underwood, '98
 Etheredge Walker, '99
 F. R. Walker, '00
 Albert C. Warren, '74
 Leonard C. Wason, '91
 Karl W. Waterson, '98
 W. H. Watkins, '95
 Edwin S. Webster, '88
 Henry A. Wentworth, '05
 Robt. S. Weston, '94
 W. G. H. Whitaker, '04
 W. R. Whitney, '90
 Clarence B. Williams, '04
 Mrs. S. P. Williams, '04
 B. Thomas Williston, '77
 Arthur Winslow, '81
 F. W. Wood, '77
 Kenneth F. Wood, '94
 Henry E. Worcester, '97
 George M. Yorke, '93
 Albert G. Zimmerman, '94



THE WALKER MEMORIAL AS IT WILL APPEAR WHEN COMPLETED. A LARGE PART OF THE ALUMNI FUND WILL BE DEVOTED TO THIS BUILDING

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Vol. XVIII

APRIL, 1916

No. 4

REUNION TO BE A REAL JUBILEE

Every feature is laid out on a grand scale in keeping with the importance of the Anniversary—Special cars are coming from many Technology centers.

All plans for the Reunion in June are now complete almost to the smallest detail.

The canvass of the class secretaries shows that the numbers in attendance will far exceed our earlier anticipations, and the principal anxiety of the committee is in regard to the disposition of the crowds. Arrangements are now being made for overflow meetings where quarters are at all limited, so that there will be ample facilities for all who come. It is, however, desirable that every man who intends to come should inform the committee as early as possible.

AUTOMOBILE TRIP

Clifton N. Draper, '08, who has been made chairman of the committee for this event, has laid out a program for the trip, and has appointed a committee representing the clubs of Buffalo, Rochester, Syracuse, Albany, Pittsfield and Springfield.

The automobiles will start from Buffalo on June 9, and rendezvous at the Hotel Onondaga, Syracuse, for the 9th; the second day's run will terminate at Pittsfield, and the third will be planned so that the tourists will arrive in Boston late on June 11, where they will be welcomed by a committee of Boston alumni.

Those who intend to take this trip should consult with the secretary of their local association and send their names to Mr. Clifton N. Draper, General Electric Company, Schenectady.

The trip is so arranged that tourists coming from north or south of this route can meet the party and arrive in Boston with it. The automobiles will be dressed with Tech colors and each tourist will wear a designating badge.

The Board of Trade of Springfield (Mass.) through a special committee is making arrangements to welcome Technology men in a proper manner when they arrive in that city.

TECHNOLOGY STEAMSHIP FROM NEW YORK

The Technology Club of New York will keep open house on Saturday, June 10. There will be a cabaret entertainment at the club house for the men; a theater party has been arranged for the women, and those who wish to shop during Saturday may leave the children at the children's room, Hotel Vanderbilt, which has been engaged by the club for this purpose.

The boat will leave New York at five o'clock on Sunday afternoon, June 11. A special program has been provided, and it will be a most delightful trip.

Of the three hundred-odd rooms available over one hundred had been ordered the last of March, indicating that the boat will be loaded with its full quota.

The various clubs are making special arrangements for attending the Reunion. Special cars will come from the larger centers, as, for instance, Chicago, Northern Ohio, Pittsburgh, etc., and the men from the Atlantic and Gulf states are arranging for cars so that they can go to New York together. Men from the Far West should correspond with George B. Jones (1445 Monadnock Block, Chicago), chairman of the Committee on Transportation of the Northwestern Association. It will be desirable for those coming from west of Chicago to arrange to come with the members of the Northwestern Association. Those desiring to come by way of New York, taking the Technology ship, can book in the special cars going to New York and others can go straight through by rail.

REGISTRATION

In the last number of the *Pantechnicon*, and in the Boston papers, there will be an announcement of the down-town office for registration, which will be open June 9 and 10. Boston men are urged to register early at the down-town office and thus facilitate the work of the Registration Committee.

Especially handsome badges are being made for us, and these will be given out from registration headquarters.

The scheme of registration is simple and very effective. The committee will have representatives on the Technology ship so

that all the guests on the boat will be registered before arrival in Boston.

HOTELS

The hotel accommodations secured by the committee are going very fast, and we are obliged actually to purchase rooms for the period of the Reunion, as it seems to be a popular time for conventions. Those who desire rooms centrally located in the larger hotels should order at once. There will, however, be plenty of accommodations for all within reasonable distance of headquarters. The chairman of the committee on hotels, Professor Charles F. Park, Massachusetts Institute of Technology, Boston, will make any reservations desired. These reservations, however, must be considered as orders.

TICKETS

The tickets will be ordered of, and distributed by, Professor Charles F. Park, chairman of the Committee on Headquarters, Registration, Hotels, etc.

As this is written the actual cost of tickets has not been determined. The total cost of everything on the men's program will be about fifteen or sixteen dollars; and the cost for women's tickets for the full program will be about half that amount.

By way of explanation we would say that the expenses of this Reunion are enormous, and although generous Tech friends in Boston are making up a very large guarantee fund, it will still be necessary to charge for tickets at least the amount indicated.

Visitors can secure these tickets in a book or they can purchase them singly, as desired. At many functions the badge will be the only means of identification necessary; each person registering will, however, be given an identification card which it will be well to keep handy.

About the first of May order cards will be sent out to every alumnus with the request that he send in his order on these cards for the tickets desired at the Reunion. The *Pantechnicon*, which will be published about May 1, will contain full announcement of every feature connected with the Reunion.

FAREWELL TO ROGERS

Those desiring to attend this meeting should send in requests to Professor Charles F. Park who has charge of all tickets.

Applicants from the early classes will have first preference. The hall will accommodate about a thousand people, and if all the seats are not taken by application by 10.30 on June 12, seats will be given to those applying at the door of the hall. A notice will be posted at headquarters indicating whether or not any seats will be available.

OLD HOME AFTERNOON

Monday afternoon, June 12, will be an afternoon for fraternizing and social intercourse. The program is kaleidoscopic, covering almost every form of boat that can get into the basin under the West Boston bridge. There will be numerous speed events, including exhibitions by the latest types of small power craft for war purposes. There will also be races, parades and evolutions of squadrons, with hydroplanes in flight and at rest, Perkins ('89) man-carrying kites, etc. This will be of great interest to the general public.

Admission to the new buildings will be by badge. Here the guests will have a chance to make inspection of the new buildings and see the exhibition, "Fifty Years of Technology," which will be one of the features of the Reunion. About four o'clock there will be a reception and tea, and in the Great Court of the New Institute the Technology battalion will have dress parade.

CLASS DINNERS AND SMOKER

Arrangements for class dinners are all made, and the different classes have been assigned to rooms either at the City Club or at near-by hotels.

About 8.30 there will be a smoker at the City Club, and late in the evening the undergraduates will escort the alumni to Rogers Building, which will be brilliantly lighted and decorated, where there will be cheering and singing.

WOMEN'S BANQUET AND ENTERTAINMENT

On the evening of June 12, there will be a banquet for the women guests in the banquet room of the Copley Plaza Hotel, under the management of the M. I. T. Women's Association, and afterwards an entertainment which has been provided by an interested alumna. The program for this entertainment is of a very superior order.

Escorts will call for the ladies at the Copley Plaza in time to take them over to Rogers Building where they can take part in the singing and cheering.

DEDICATION REUNION, JUNE 12, 13, 14, 1916

June 9, 10, 12, Registration.

June 9, Automobile tour starts from Buffalo.

June 11, 4:00 p.m. Technology Steamboat from New York to Boston.

June 12, 11:00 a.m. Farewell to Rogers.

12:00 m. Fraternity Luncheons.

2:00 p.m. Water Fête—Charles River Basin.

Inspection of New Buildings.

4:00 p.m. Tea in New Buildings.

6:00 p.m. Class Dinners.

7:00 p.m. Banquet and Entertainment for Women, Copley-Plaza.

8:00 p.m. Smoker at City Club.

10:30 p.m. Cheer Rogers.

June 13, 10:00 a.m. To Nantasket.

Luncheon.

Class Stunts.

8:30 p.m. Pageant at New Buildings.

June 14, 11:00 a.m. Technology Clubs Associated.

12:30 p.m. Departmental Luncheons.

12:30 p.m. Buffet Luncheon for Women, at Riverbank Court.

2:30 p.m. Dedication of New Buildings.

7:00 p.m. Banquet.

DEDICATION REUNION COMMITTEE

ADVISORY COMMITTEE

Charles A. Stone, '88, *Chairman*; James W. Rollins, '78; Walter B. Snow, '82; F. H. Fay, '93; M. L. Emerson, '04; I. W. Litchfield, '85, *Secretary*; Walter Humphreys, '97, *Treasurer*.

CHAIRMEN OF COMMITTEES

Headquarters, Registration, Hotels, etc., Prof. Charles F. Park, '92
Water Fête—Charles River Basin Henry A. Morss, '93
Inspection of New Buildings, Reception and Tea

Joseph H. Knight, '96

Technology Clubs Associated James W. Rollins, '78

Departmental Luncheons Alexander Macomber, '07

Day of the Classes at Nantasket Frederic H. Fay, '93

Golden Jubilee Smoker Merton L. Emerson, '04

Dedication Dr. Richard C. Maclaurin

Banquet Charles C. Peirce, '86

Decorations, Banners, Flags, etc. Prof. H. W. Gardner, '94

Publicity, Souvenir Program, Special Souvenirs, etc.

George C. Wales, '89

Transportation Henry J. Horn, '88

Songs, Bands and Orchestras George B. Glidden, '93

Photographs and Moving Pictures George C. Dempsey, '88

"Fifty Years of Technology" James P. Munroe, '82

Grand Pageant, Edwin S. Webster, '88, Prof. Ralph Adams Cram

Fraternity Luncheons Stephen Bowen, '91

Class Dinners Fred A. Wilson, '91

NANTASKET DAY

Three specially chartered boats will leave Boston about 10.00 o'clock a. m. The various classes will line up on the beach with their new class banners, and march to the arena. In the meantime the ladies and guests will go directly to the arena where they will meet their escorts. Luncheon will be served and afterwards the class stunts will be given. These will be preceded by a procession of mascots of the various Technology clubs all over the world. There will be three bands in attendance.

It is hoped that the boats will arrive in Boston by half-past five, on that day, as the pageant will start early and there will be an opportunity for only a hasty dinner.

THE PAGEANT

The pageant will begin at Rogers Building where an academic procession of the Faculty members, preceded by the President, and properly escorted, will bear the seal and charter of the Institute to the river and there embark in a vessel copied after the *Bucentoro*, the state barge of the Doges of Venice. This will take place probably about seven or half-past seven o'clock. The boat will be escorted across the river by a number of smaller craft manned by groups representing various historical periods; there will be singing and string music during the passage.

On arrival on the Cambridge side the procession will rendezvous in one of the Institute buildings while the guests are being seated in the arena. Please note that there will be an immense throng of people, and our Technology friends will do well to get their seats as early as possible as there will be only about half an hour between the arrival of the academic procession and the beginning of the masque. The preference of seats at the masque in the Great Court of the Institute will be given to Technology men and their friends. The seats will probably sell for two dollars each, and there will be eighty boxes which are offered at thirty dollars each. The boxes contain six chairs. Already about a dozen boxes have been sold.

Description of the masque is almost impossible. It is attracting attention all over the country because of the exceptionally favorable character of the environment and the unusual conception evolved by Professor Cram. The stage and lighting effects will be in full keeping with the high character of the other features.

TECHNOLOGY CLUBS ASSOCIATED

Meeting of the Technology Clubs Associated will be held in Huntington Hall at 11 o'clock, June 14. President James W. Rollins, '78, will preside. Walter Humphreys, '97, is secretary. The program will consist of reports from associations and the selection of a meeting place for next year.

DEPARTMENTAL LUNCHEONS

These will be held at the Somerset and at the Puritan, on Commonwealth avenue near Massachusetts, each departmental group being addressed by prominent representatives of the department. These hotels have been suggested as they are within easy walking distance of the new Institute where the dedication exercises will be held.

LUNCHEON FOR WOMEN JUNE 14

While the departmental luncheons are in progress the women will have a buffet luncheon at Riverbank Court directly across Massachusetts avenue from the Institute buildings. Here their escorts will meet them and take them over to the dedication exercises in the afternoon.

DEDICATION EXERCISES

These will be held in the Great Court of the new buildings at 2.30 p. m., June 14. It is not yet known whether the classes will meet in a body or be seated as they arrive. Full notice will be given in the last issue of the *Pantechnicon*. Admission of alumni will probably be by badge.

ALUMNI BANQUET, SYMPHONY HALL, JUNE 14

The banquet will be held at 7.00 o'clock, and accommodations will be made for 1400 people. After 1400 orders have been received it will probably be necessary to close the books.

This will be a most unusual banquet, and during the program a telephone demonstration, far grander than anything yet attempted, will be given to the guests. Prominent speakers have been engaged and it will be in every way worthy of the great celebration it will bring to a close.

SOUVENIRS

A sales committee has been organized for the purpose of distributing the souvenirs which will be offered at the Reunion. These will consist of a handsome souvenir program; a bird's-eye view of the new buildings suitable for framing; a medal struck off in honor of the occasion, showing both the Rogers Building and the new buildings; photographs of the presidents; photographs of various events connected with the Reunion, which will be developed and offered for sale almost as soon as the events occur.

The Sales Committee will coöperate with the Committee on Photographs in this respect.

PARKING FACILITIES

There will be free parking facilities for automobiles at the rear of the Institute buildings on June 12, from 9.00 a. m. until midnight; at the time of the pageant on June 13, and from 11.00 a. m., June 14, until midnight.

RAILWAY FARES

Arrangements have been made with the railroads to give us the lowest fares that are given for a convention of this character. Full announcement will be made in the last number of the *Pan-technicon*.

STUDENT PARTICIPATION

It is most remarkable that nearly three fourths of the undergraduates have volunteered to remain over until after the Reunion in order that they may assist by taking part in the pageant and acting as a grand chorus on other occasions.

MISCELLANEOUS

Books. We are now receiving a number of books and we hope that these will make a very creditable showing. If for any reason you cannot secure your books to send us, give us the title and all information about them so that they may be included in the catalogue.

Reunion Songs. Although the competition will close on the 15th of April, please do not hesitate to send in your songs if you have an inspiration in this line. We need them.

ARE WE EQUAL TO IT?

We have an opportunity that amounts to a duty.

It is the opportunity to dedicate the new Institute buildings free from debt.

It means the completion of an undertaking begun by us nearly five years ago, and which we all believe can be creditably accomplished.

Although the magnificence of the Dedication Reunion is uppermost in the minds of alumni wherever they may be, there is a matter which should come before anything else. It is this unfinished effort to furnish the President with the help that he has asked us for.

The fund will close July 1, 1916; this is the last call.

It is the purpose of this article to call the attention, and immediate action, of those who are not stockholders in the new Technology, to the opportunity of giving the Reunion the greatest significance. It is a chance to show to the world that we appreciate what the Institute has done for us and that we are grateful to the generous benefactors from without our ranks.

The fact that the fund has not reached a million dollars is not the fault of the alumni. We believe that it is due to the method of approach or the failure to show the actual conditions as they exist. We believe that in the short two months that still remain it is possible to make up for lost time and to do a thorough job.

The small percentage of subscribers, large and small, is a source of much regret. It does not fairly represent Technology spirit, and we believe that Tech men will not allow it to stand.

This is no time for any loyal Tech man to try to avoid the issue or to see how easily he can get off.

Ask the question of your own conscience, how much you can reasonably afford to give and pledge that amount at once.

The obligation is on rich and poor alike, but the amount depends on the size of your pocketbook.

There are a very few who can give \$25,000, there are others who can give a less number of thousands, and there are many more who cannot give thousands but can give hundreds.

If you cannot give hundreds will you show your loyalty by giving dollars? If you cannot afford more than one dollar per year for five years Technology does not ask for more, but asks this promptly.

First payments on subscriptions made now will be called for in October. Will you "do your bit"?

ALUMNI FUND IS UPPERMOST

The Forty-Ninth Meeting of the Alumni Council is devoted to the increase of Fund subscriptions and the Dedication Reunion

The meeting of the Alumni Council, held at the Engineers Club March 27, was devoted to the Alumni Fund and the great Technology Dedication Reunion in June. Members of the Association of Class Secretaries, not members of the Council, were invited to the meeting which was a large one. Jasper Whiting, '89, was salad orator.

After the reading of the minutes the following motions were made and carried:

That the chair appoint a committee of three to consider the question of a design for academic costume of the Institute and report to the Council.

That the past presidents of the Alumni Association be invited to attend the meetings of the Council.

That the chairman be authorized to appoint a committee of three to consider suggestions for membership on various Advisory Councils which are annually appointed at the April meeting.

In the absence of President Charles A. Stone, '88, Vice-President Joseph H. Knight, '96, presided. In beginning the program he spoke of the new effort which is being made to add \$500,000 to the Technology Alumni Fund and bring it up to a total of one million dollars. He then read copy of a letter which was about to be sent out by the Fund Committee and called on the secretary of the committee, I. W. Litchfield, '85.

Mr. Litchfield spoke of the handicaps that the Fund Committee had been under. Mr. Smith's gift of two and a half million dollars to the Institute gave the general impression that the Institute was well provided for, and the fund, instead of being up to the million mark, reached about half that amount. The condition of business and the European war had had a bad effect on raising money, and the effort of the committee to secure a creditable subscription from the alumni had to a large extent failed. The speaker said that he thought this was due rather to the manner in which the alumni had been approached than to

the spirit of the alumni themselves as the sum subscribed obviously did not represent alumni loyalty to the Institute in any degree. It had been decided by the committee to send out a plain statement of fact showing just what the money had been spent for and what was absolutely needed to complete the new buildings. It had been hoped by the Council and by the committee that the other matters might be taken care of in another way and that the alumni might devote their energy to raising money for the Walker Memorial. This unfortunately was not possible. The plain fact is that Dr. MacLaurin must have another half million dollars to finish the work that we have started, and it is up to the alumni to do a thorough job.

Members of the Alumni Fund Committee, which number now about ninety, are all heartily in sympathy with the movement to close the fund July 1, and as soon as the circulars are out a great effort will be made more especially to get the smaller subscribers, who have hesitated to send in pledges for small amounts. The campaign is going to be a short and energetic one, and it is believed that the results will far exceed expectations.

Everett Morss, '85, chairman of the Alumni Fund Committee, said that when we started to raise the fund Mr. Smith's gift overshadowed everything. If the alumni had come up with a subscription of a million dollars the financial side would have been completely taken care of. Not only does the Institute need this money to complete the building, but as the expenses of the new buildings are going to be enormously greater than the old, the institution needs a much larger endowment. He said that the President was going away tomorrow in an effort to secure more endowment, and that nothing would help him more in this campaign than to feel assured that he would not have to ask for any money to complete the plant.

Frederic W. Fuller, '96, representative of the fund from Springfield, Mass., who was present, said that he believed that every alumnus of the Institute ought to give something to the fund. He was willing to make a wager that he would get something from every Tech man in Springfield and that the total amount of the fund could be largely increased. He felt that this was the best way to hold up the hands of the President, and now is the time for everybody to be interested in helping.

At this point in the program the mysterious Reunion Quartet,

which has been organized by the students, was ushered in. They were dressed in a specially designed costume of cardinal and gray and wore half masks over their faces. They rendered the new Reunion song by Irving B. McDaniel, '16, and responded to an encore. The last song was the Stein Song in which the entire audience joined with a will.

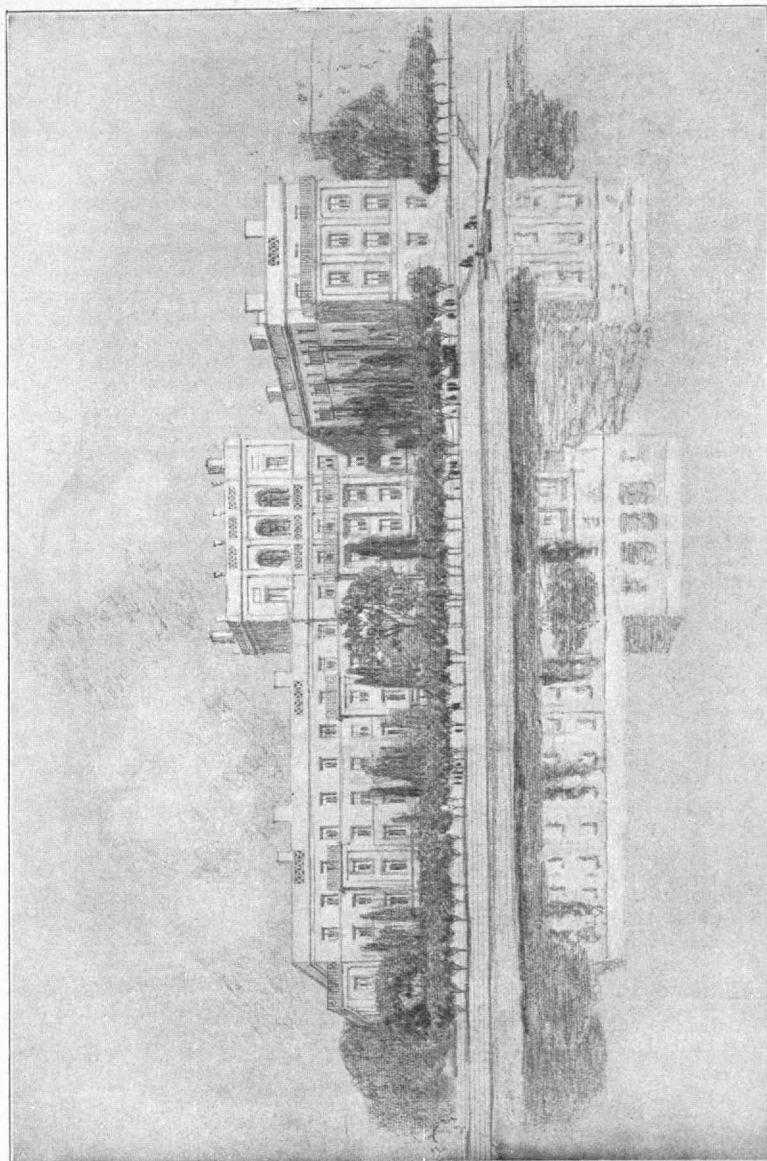
Professor Cram, director of the pageant, was the next speaker. He began his story by telling of his close friendship for many years with Fred Bullard, '87, and the joy he had in knowing him. He had heard the Stein Song long before any Tech man ever heard it—in fact soon after Bullard had written it. He characterized the Stein Song as a triumphant thing worthy of Technology that redounded to the credit of the Institute.

In referring to the pageant he said that although we were men of science yet we were appreciative of the beautiful and esthetic side of things. The artistic and scientific side of our education must go on together. The pageant was to be a beautiful testimonial to a great scientific institution. He then gave a brilliant description of the program which is to be carried out in the Great Court on the evening of June 13, going quite fully into details and stating that plans had so far progressed that he could speak with full assurance as to the wonderful character of the masque.

The next speaker was Lester D. Gardner, '98, of New York, who told of the arrangements the New York Technology Club had made for entertaining its guests by planning to give a cabaret performance at the club for the men, arranging for a theatre party for the women. He also stated that they had engaged the children's room at Hotel Vanderbilt where the smaller children could be entertained while their mothers were shopping or otherwise engaged. He then told of the plans for entertaining the voyagers on the trip from New York to Boston, which were most elaborate and interesting.

Henry A. Morss, '93, was the next speaker. He told about the activities to come off in the Charles river basin on Monday afternoon, June 12. His picture of this afternoon was a revelation to most of his hearers. Never before has this sheet of water been used in any degree to the extent of its possibilities, but on this occasion there will be a presentation that will astonish and delight the Boston public.

George B. Glidden, '93, reported that nineteen classes had regis-



NEW TECH DORMITORIES NOW BEING BUILT, TO WHICH PART OF ALUMNI FUND HAS BEEN APPLIED

tered stunts and that most of them are of a very high order and very interesting.

James P. Munroe, '82, made a short report for the committee on "Fifty Years of Technology" and H. W. Gardner, '94, for the Committee on Decorations.

One on The Review

The REVIEW is under the painful necessity of making a revelation of its fallibility.

Some weeks ago a note was received by the President presenting a new photograph of President Rogers. This was recognized as a very lucky find, and the REVIEW, after showing it to a number of friends of President Rogers, had a cut made and printed in color in the January number. All would have gone as happy as a marriage bell if Professor W. H. Pickering, '79, hadn't suggested, in a communication from his home in Jamaica, that it was a most excellent likeness of Alvan Clark, the celebrated telescope manufacturer of Cambridge. Further investigation showed that Professor Pickering was correct, and we now make this explanation.

As a matter of fact a number of professors and others who were well acquainted with President Rogers, congratulated the REVIEW on this new and most excellent picture and even wrote in for some extra proofs for framing.

Reminiscence Number

The present number of the REVIEW is devoted largely to reminiscences. The class news is monumental in this issue; nearly 150 pages of class news is presented, which is a third more than we have ever published before, and which is certainly a record.

Many of the reminiscences are excellent, but the material is almost inexhaustible, and it is hoped that our friends who read this will take an interest in sending in their reminiscences which can be printed in the class news at any time and which will help make this department even more entertaining.

When you read over the class news think of the amount of labor that your class secretary has done to accomplish this great work, and make a resolve to assist him with interesting news whenever you can.

HISTORY OF THE MEMORIAL TO GENERAL WALKER

The movement was started in 1898, but uncertainty as to the Institute's location delayed final plans until this year

At the February meeting of the Alumni Council, President Charles A. Stone, '88, read the following history of the Walker Memorial Fund which is of much interest at this time:

In December, 1898, upon recommendation of a special committee composed of Dr. H. W. Tyler, '84, Mr. Richard A. Hale, '77, and Mr. Harvey S. Chase, '83, who had been appointed a few months before by the Class Secretaries Association to consider a memorial to General Walker, the Alumni Association voted to appoint a Walker Memorial Committee of nine to undertake by subscription the collection of a fund to be applied by future agreement with the Corporation toward the cost of erecting and equipping a gymnasium as soon as deemed practicable by the Corporation. Because of General Walker's interest in physical culture and athletics this form of memorial was felt to be particularly appropriate. Dr. Tyler was appointed chairman of the new committee.

The first appeal for funds was issued in May, 1899, and at the December, 1899, Alumni Association meeting 230 subscriptions, aggregating \$21,000, were announced. At that meeting the committee was authorized to confer with the Corporation in regard to the purchase of suitable land for the gymnasium and it was voted that if possible provision should be made to include other social objects.

By December, 1900, \$41,000 had been subscribed. At that time the Corporation voted to set aside for a site either 10,000 square feet of land on Trinity place, corner of Stanhope street, or, if preferred, 48,000 square feet on Garrison street on condition that \$100,000 be subscribed by July 1, 1901, for the erection of the building; also they agreed to provide a suitable man to conduct a department of physical culture and requested the Faculty to confer with representatives of the Alumni Association and submit a plan for the building and its use. At the same time the Alumni Association authorized the committee to confer with the Faculty

and authorized the transfer of the funds collected to the treasurer of the Institute to be applied toward the erection of the building whenever the plans of the Corporation and Faculty were accepted by the committee.

A few months later Dr. Pritchett urged the completion of the subscription and an active campaign brought the amount early in June, 1901, to over the \$100,000. In November, 1901, a committee of the Corporation (Colonel Livermore, Mr. Nathaniel Thayer and Dr. Pritchett) issued a circular inviting contributions from outside sources towards a second hundred thousand for the completion of the memorial for the threefold purpose of a social center for student life, a place of physical instruction and a gymnasium. In December, 1901, there were reported 1,809 subscriptions from the alumni amounting to more than \$101,000 and \$35,000 pledged by outside people toward the supplementary fund.

In 1902, 10,000 square feet of land at the corner of Trinity place and Stanhope street was assigned to the memorial, and Professor E. B. Homer of the architectural department prepared plans for a building of five floors. At the December, 1902, Alumni Association meeting, possible removal of the Institute was discussed, and from that time to 1912 uncertainty as to the Institute plans caused the entire matter to become dormant.

In March, 1912, President Maclaurin, at the request of the Walker Memorial Committee, appointed a special committee of five, including two members of the Memorial Committee, to work out a program of what the memorial ought to be. Much work was done and a delegate inspected student unions at other institutions. In the spring of 1913 this special committee made recommendations which may be summarized as follows:

It should be convenient of access, architecturally dignified and located with reference to permanent use. It should be large enough to provide for a student body of 2,000 but not so large as to lose the attractiveness of intimacy.

It should be primarily a social club for undergraduates, with incidental provision for Faculty and alumni whose contact with the undergraduates would be valuable.

It should not include the general dining hall or the general gymnasium, because these features if adequately provided for, would interfere with its unity of purpose and its proper proportions, but there should be such restaurant and gymnasium

facilities as would naturally go with a student club house; also it should contain offices for numerous student activities and a hall for dramatics and social gatherings.

Membership should be compulsory and the memorial, as a whole, approximately self-supporting.

At the February, 1915, Alumni Council meeting the Walker Memorial, dormitories, lunch room and gymnasium were discussed. At the March, 1915, meeting plans by Mr. Bosworth for the general arrangement of these facilities, and details for the Walker Memorial were shown. These plans were freely criticized. Also the question of devoting some of the Alumni Fund to the memorial was discussed. It was pointed out that the circular of April 9, 1912, asking for Alumni Fund subscriptions included among other purposes "an enlarged Walker Memorial including the gymnasium and a complete social center," but that the fund had not reached expectations and therefore something else would have to suffer if any amount was devoted to the memorial. It was voted that it was most important to have the memorial ready for occupancy in 1916 and that provisional plans and estimates should be prepared omitting the lunch room and general gymnasium for required physical training but retaining substantial gymnasium features for other purposes.

At the March, 1915, meeting revised plans, presented by Mr. Bosworth, met with the general approval of the Council, and it was hoped they might be carried out by the Corporation. These plans called for a building of about 130 feet frontage and 90 feet deep, three stories and basement giving about 28,500 square feet of space. They did not include a dining hall or gymnasium for general purposes. It was voted to appoint a committee of three (to consist of the President of the Alumni Association, a member of the Alumni Fund Committee and a member of the Walker Memorial Committee) to confer with President Maclaurin as to how the additional funds could be obtained.

At the May, 1915, meeting Dr. Tyler reported for this committee of three that, after conferring with Dr. Maclaurin and the Executive Committee, a campaign for raising funds to complete the Walker Memorial could be initiated but that the *Lusitania* catastrophe had so changed conditions that they deemed it unwise to prosecute same at that time. However, work on the plans should be continued and the finances left until the next year.

History of the Memorial to General Walker 227

At the December, 1915, meeting a new set of tentative plans which met with general approval of the Memorial Committee were presented. These combined the suggestions of the Walker Memorial Committee as contained in the previous plans with the dining hall and gymnasium which the Institute would have to provide. Tentative floor plans and front elevation were attached. The net available floor area is 50,000 square feet against about 25,000 in the former plan. The estimated cost of this building as first outlined, figured roughly on a cubic-foot basis, is \$500,000. By changing the exterior finish, making the portico a straight line of columns instead of curved, reducing the length of the building thirteen feet and simplifying the interior finish it is felt that this cost can probably be kept at \$400,000.

The condition of the Walker Memorial Fund on January 1, 1916, was as follows:

Subscriptions received		\$95,214.68
Interest		64,569.14
		<hr/>
		\$159,783.82
Expenses	\$4,044.15	
Less appropriation of association	600.00	
	<hr/>	3,444.15
		<hr/>
Balance on hand		\$156,339.67

There are \$20,000 of unpaid subscriptions on which Dr. Tyler hopes to obtain payments sufficient to bring the fund to approximately \$170,000. The Corporation have voted to apply \$50,000 of the Alumni Fund to the Walker Memorial, thus giving a total of \$220,000 available now, and leaving \$180,000 yet to be secured. The subscriptions of \$35,000 secured from outside people in 1901 are in a very uncertain state and Dr. Tyler has been unable to get any information as to what might be expected from same.

The furnishing of the building is not included in the above figures and no estimate has been made of the cost. The furniture from the old Technology Club will be available and there is also the Cilley bequest now amounting to \$65,000, the interest on which or the principal may be used for books, pictures, statuary, etc.

PROFESSOR C. FRANK ALLEN TO RETIRE

Completes thirty years as a Member of the Faculty—His retirement a great loss to Civil Engineering Department

President Maclaurin announces the retirement of Professor C. Frank Allen under the benefits of the Carnegie Foundation, the same to take effect at the close of the present academic year.

Professor Allen, who is among the most popular of the instructing staff, is a Roxbury boy and a graduate of the Roxbury Latin School, taking his S. B. at Technology in 1872 and being connected with the Institute for the past thirty years as one of the Faculty.

Following graduation, Mr. Allen had varied experiences all conducing to preparation for the work of teaching that he was to take up later. He was engaged in work connected with the water systems or sewers of various municipalities, Newton, Providence and Boston among them. In 1878 he went West and from that year until 1885 was assistant engineer of the Atchison, Topeka and Santa Fé Railway. During a year, however, in this period he served as chief engineer of the water works of Las Vegas.

In addition to his studies as an engineer, Mr. Allen took up the study of the law, was admitted to the bar in New Mexico in 1885 and in Massachusetts in 1901. Meanwhile he was city attorney of Socorro, N. M., for a year.

He was next appointed assistant professor of railway engineering at M. I. T. in 1887, two years later he became associate professor and since 1896 he has been professor, always in the department of civil engineering. His coming to the Institute gave to it a standing that has been continued, in that his experience has been valuable in courses on contracts and specifications and other matters related to the legal side of engineering. He proved to be very helpful in developing the courses on railway engineering, his books being the standard publications in the specialty and used practically everywhere.

Professor Allen has done a large share in public and association work. For four years in the early nineties he served on the school committee at Sharon, being chairman for two years; he is a member and ex-president of the Boston Society of Civil Engineers, a



PROFESSOR C. FRANK ALLEN, '72

Who is About to Retire

member of the American Society of Civil Engineers, member and ex-president of the Massachusetts Highway Association, member and ex-president of the New England Railway Club, a position held by his fellow in the department, Professor C. B. Breed, who by the way, is to take up some of his specialties in instruction like the contracts and specifications. Professor Allen was further a member of the American Statistical Association and ex-secretary and ex-president of the Society for the Promotion of Engineering Education.

On the literary side he has been a member of the publication committee of the TECHNOLOGY REVIEW and of the *Journal of the Massachusetts Highway Association*. Among his larger technical writings are books on "Railway Curves and Embankments," 1889; "Tables for Earth Computations," 1893 and "Field and Office Tables," 1903, the first-named of which has passed through many editions.

Professor Allen has been a good teacher, a clear thinker and his services were available in the executive work of the department of civil engineering although he was not named to any office in it. Students as well as Faculty regret this retirement.

Society of Tech Architects Formed

On Wednesday, March 8, the Society of Technology Architects was organized in Huntington Hall. This is a society of former students of the architectural department of the Massachusetts Institute of Technology, its object being, as set forth in its by-laws, "To further the well-being of the department of architecture by fostering the interest of the members in the department and in each other."

The society already has a membership of one hundred and hopes in the near future to largely increase the number as there are about twelve hundred former students of the department in the United States.

The officers of the society are: President, William H. Brainerd, '87; vice-president, Arthur G. Everett, '77; secretary-treasurer, Alexander S. Jenney, '83.

The executive committee to serve for two years: Stephen Codman, '92; Miss Eleanor Manning, '06. To serve for one year: William T. Aldrich, '01; Charles Everett, '07.

CO-OPERATION AMONG TECH FRATERNITIES

By extending fraternal relations to the uniting of Fraternities many advantages are secured and true spirit of fraternity fostered

Probably no phase of Tech life and Tech activity promises to be more affected by the change of conditions at Technology on the Charles than the workings of the fraternities. Already this change has made itself felt in several ways. The most marked change seems the growing spirit of coöperation among the fraternities and the scientific and systematic attack on the high cost of living.

The first step in this direction was made last year, when a number of fraternities joined together in their buying with the Tech Union restaurant, consolidating their purchasing power and commanding better prices in consequence. This was done through the co-operation of the Institute and in particular of Mr. Ford, the bursar, who has taken a deep interest in all the problems of Tech student life.

This led indirectly to the reopening of the question of the inter-fraternity council, which had been broached at various times before and had even been put into temporary operation several years ago, but with little success. Last year this question was reopened, and despite the small amount of actual progress made, the way was cleared so that when William Shakespeare, '16, of Delta Upsilon started the ball rolling by a circular letter addressed to the various chapter houses little opposition was met and considerable enthusiasm was aroused. The preliminary work of drawing up a suitable constitution was then entered upon. The name chosen for the body is "The Inter-Fraternity Conference of the M. I. T."

The governing body of the conference is a council wherein each fraternity is entitled to one vote. The scope of the conference is to regulate matters of common interest to the fraternities and to promote better feeling not only among the fraternity men themselves, but also between them and the large number of non-fraternity men.

The council is given the power to decide all questions, but provision is made for a referendum if a quarter of the fraternities so

petition. The actions of the council are limited to those binding equally on all fraternities and do not include the question of the regulation of internal affairs.

The council has an executive committee composed of the president of the council, who must be a senior; the vice-president and the treasurer, who must be juniors, and the secretary. Three other members are elected from the council at large.

At present the council has only had two meetings, but it has already made noticeable progress. At the beginning of December a Rogers anniversary smoker was held in honor of the founder of Tech, and the management of the affair was in the hands of the council. The smoker marked a step in the direction of better feeling, as it was a huge success, open to all, and held in the Tech Union. So far no definite steps have been taken on rules for rushing which have long been demanded by some. It is felt that it is better policy to wait until the move into Cambridge has been made and conditions better realized.

But there is no doubt that this time the conference has come to stay, and is to be reckoned with in the future as an important factor in student life at Tech. Plans are already being discussed as to the part that fraternities are to take in the immense pageant that is to be one of the features of the opening exercises of the new Technology, and this, too, is in the hands of the council.

The officers of the conference for the first year are Thomas D'Arcy Brophy of Butte, Montana, president; Philip N. Cristal of Bowling Green, Kentucky, vice-president; L. McGrady of Fall River, treasurer, and William Shakespeare of East Orange, Charles W. Loomis of Boston and Ralph Millis of Newport, R. I., executive committee.

Another step that has been taken towards coöperation has been the formation of a Stewards' Club, composed of the members of the various fraternities who are in charge of the buying of supplies.

Further progress along these lines is expected as a result of the interesting investigation now being carried on by Paul C. Leonard of Lakeville, who is preparing a report for a class in statistics on the various costs and charges of the different fraternities. He is assembling his data at present, but hopes in a few weeks to have them complete, when he will send a copy of his findings to the chapter houses for comparison.—*Boston Herald*.

THE TECHNOLOGY ENGINEER CORPS

Institute professors, alumni and undergraduates form a corps of engineers, the only real organization of the kind in the state

The necessity for engineers in modern warfare is a fact too well known to need explanation or verification. That the United States lacks them in even reasonable numbers is also quite generally conceded. The register of the state militia of Massachusetts contains a corps of engineers, but this unfortunately consists of but two men, a major and a captain. The former, Major Harrison, has for years been trying to establish a battalion or even a company of engineers, but his efforts have been unavailing. Recently an attempt was made to convert the First Corps Cadets into engineers, but too much opposition developed. It remained, then, for Tech to step forward, which Tech did, as usual. Two hundred students and professors have organized a volunteer engineer corps. A meeting was held on February 25, when Major Cole, Professor Porter, and Colonel Craighill, U. S. A., made short addresses. A committee, consisting of Professor J. W. Howard, civil engineering; Professor C. W. Green, electrical engineering; Mr. H. B. Luther, civil engineering; Mr. J. D. Mackenzie, geology; Major J. A. Tobey, military; Colonel Ralph Millis, '16, and A. C. Lieber, '16, was appointed to work out the details. President MacLaurin showed his assent and good wishes by speaking favorably of the corps at a convocation held on the following Friday. The first exercise took place on Friday, March 3, in the South Armory on Irvington street, which has been placed at the disposal of the corps free of charge by Colonel Fullerton of the Coast Artillery Corps, with the consent of the adjutant-general of the militia, who is also backing the corps for all he is worth. A communication has been received from the chief of engineers of the U. S. Army stating that he is much gratified by the interest shown at Tech and further saying that he has recommended to the War Department that 200 *Engineers Manuals* be added to the general library in order that they may be lent to the members

of the corps. It is expected that General Wood will review the corps later in the year.

The course consists of lectures and drills one hour a week each. The former are held in the buildings of the Institute and the latter in the armory. At present there are two companies commanded by Colonel Millis and Major J. W. Barker of the freshman regiment. J. A. Tobey, assistant in military science, is temporarily commander-in-chief. Such subjects as map making and reading, bridge building and demolition, transportation, obstructions, cordage, trenches, mining, camp sanitation, and the like are to be taken up. The lectures are to be given by prominent army officers and engineers who have volunteered their services. The first is by Dr. Morton Prince of Boston and "Somewhere in France," who speaks on "Organization." A uniform has been adopted, consisting of campaign hat, flannel shirt, olive drab cotton breeches, and canvas leggins. The contract for this has been awarded to the Harding Uniform Company of 22 School street, Boston. The price is \$6.50, which being a contract one, is considerably lower than that of individual ones. The uniform is the same as that worn at Plattsburg.

Major Cole, professor of military science at the Institute has general charge of the course, for which he is well qualified, having taught a similar one at the regular army school at Fort Leavenworth for seven years. He has already given instruction in knot tying and splicing to the corps. On Friday, March 17, Mr. C. E. Morrow of the architectural department gave a lecture on timbers, explaining how to recognize the different kinds and how to employ them in temporary bridge building. Much enthusiasm is being shown by the men and the success of the organization in years to come is well assured.

J. A. TOBEY, '15.

Bequest from Ex-Mayor Cobb's Estate

Under the will of ex-Mayor Samuel C. Cobb, who died in Boston in 1891, one fifth of his estate was to go to certain beneficiaries after the death of the surviving heirs. Under this will the Institute of Technology, Harvard University, the Boston Young Men's Christian Union, the Massachusetts Society for the Prevention of Cruelty to Animals and the Taunton Library will receive about \$40,000 apiece.

WRESTLING AT TECHNOLOGY

Growth of interest in this branch of sport has produced
teams of superior skill

Five years ago three undergraduates at the Institute formed the habit of coming to the gym regularly for exercise. They tried their hand at all sorts of games and among other sports took to occasional wrestling. The latter form of exercise appealed to them in particular, and they practiced with more attention so that the following year saw the formation of a wrestling team. It was not a very effective organization to be sure, but nevertheless it did win one meet in its first season. The number of men interested in wrestling gradually increased but, to the Institute at large, the sport still remained unknown. Then, two years ago, the team jumped into prominence by winning a championship from Yale, thus bringing Technology to the sudden realization that it not only possessed a wrestling team but that it could also boast of a championship one.

Since its inauspicious beginning, the wrestling squad has truly had a remarkable growth. At the opening of school this year thirty-five men reported at once for practice. Their numbers were swelled immediately after Field Day when ninety freshmen substituted wrestling for the required gym-work, thus bringing the squad to a total of one hundred and twenty men. To accommodate them the team has only one mat which it was fortunate to obtain from the Institute through the efforts of Dean Burton. But one mat twenty feet square is far too small for one hundred and twenty men, and the squad had to be reduced and subdivided into sections which practice at definitely scheduled hours.

The varsity squad consisting of fourteen men and a coach has three hours per week reserved for its practice. The freshman team and substitutes likewise have the same number of hours for its workout. The remaining hours are divided among the rest of the freshman squad, and any upperclassman not on the team may use the mat with them. The freshman classes are taken charge of by sophomore candidates for assistant manager of wrestling. The latter coach and keep a record of attendance of the freshman classes, reporting absences each week to Mr. Kanaly of the Physical Training Department.

This year the team has, in several ways, made a decided step forward. Previous to this season the team has always been self-coached and self-supporting, but now, through the aid of the Athletic Association, has hired a wrestling coach. This year also the team has made a big departure from its former practice of wrestling Y. M. C. A. teams and has scheduled instead seven college meets. The latter include some of the hardest teams in the country.

In the last two or three years wrestling has become one of the most popular sports at Technology. Not only have the numbers on the squad grown rapidly but the student body has turned out in large numbers to the meets. At the Harvard match, under favorable conditions, as many as four hundred undergraduates have been present, which is very remarkable when one considers the general lack of athletic interest at the Institute. The team itself is very enthusiastic in its work, practicing steadily and with a purpose in spite of its handicap in the matter of mats. Any afternoon one may see its activity at the gym; the mat swarming, other men practicing on odd corners of gym mats, others pulling chest weights or rowing machine, everybody getting himself into best possible condition.

The growth of wrestling has been due entirely to the initiative of the men themselves. They were thrown absolutely on their own resources without financial support and without a coach. For years the team practiced on small gym mats, collected at odd times when they were not in use elsewhere. Later it had a donation of one mat and then received financial support from the Athletic Association so that it was able to get a coach. However, there is still much to be desired. Other colleges, which the team met, had both a coach and other facilities. At Harvard, for example, there are several mats with a much smaller squad. There never are more than two couples on a mat at once. At the Institute even with careful grouping, the men must practice fourteen at a time on the one mat. Yet in spite of this handicap, Technology's self-coached team has beaten other colleges consistently. Never until last year did it lose to a college team. Nothing can be done to help the team in the present gym, for even were there mats, floor space is unavailable. But at the new Technology things should be different. It would seem that the wrestling team deserves a reward there in the shape of more mats and plenty of room. —x.

THE BEGINNING OF SOCIAL LIFE AT TECH

The Chronicles of the V. L. Club, which flourished in the early eighties, are like legends from Bohemia

The fall of 1882 saw the birth of the first regular dining club of the Institute and, in the short two years of its existence, it satisfactorily proved to its members that life was not necessarily one "long, demnition grind"—even though our instructors tried to make it so. For in spite of one or two backsliders who were Institute "Specials," the majority of our club members kept their regular rank at graduation and yet had time to devote plenty of energy and thought to other matters more frivolous, and from which the larger number of students at that time were debarred.

It is hard for a modern student to realize how barren and forlorn and lonesome life was at the Tech in the 80's. The 300 odd students assembled each morning for class room, laboratory and draughting room and then, when work was over for the day, dispersed to their separate homes all over the city and suburbs. The only social meeting of students I ever recall attending was dear old Professor Lanza's annual Christmas party—so that, when, in the fall of '82, the beginning of my senior year, I was asked to join a dining club by Leonard and Tompkins of my class, I jumped at the chance and was duly initiated.

There were about a dozen of us regular members that first year—Leonard, Tompkins, Hardon, Eppendorff, '83; Baldwin, Bunce, '84; Joe Pierce, O'Brien, Jim Kimball, Spaulding, Harding, '85; and after various and sundry trials, we located definitely at the Carrolton on the side street opposite the present Hotel Thorndyke and across the way from the old Providence station.

The Carrolton was a resort of Bohemians, artists, young doctors, actors, musicians, and was famous for its Italian cooking, the cuisine being presided over by one Tony, who not only served spaghetti in true Italian style, but who occasionally let his temper get the best of him, and ran amuck, brandishing his huge carver at any and all comers.

Our means determined our name "V. L." (\$5 limit), and although our appetites were hearty, I do not think our landlady lost by the agreement, for almost nightly there were fines and extras which



Left to right: C. H. Thompkins, J. G. Eppendorff, W. H. Bunce, W. L. O'Brien, J. L. Kimball, H. Ward Leonard, Robert Hardon, W. E. Spalding, H. F. Baldwin, Fred Barnes, Josiah Pierce, Jr., J. P. Harding.



Left to right—Top row: C. M. Wilder, W. H. Bunce, I. W. Litchfield.
 Middle row: Victor Cumnock, ———, J. G. Eppendorff, E. C. Lufkin, J. A. Cameron.
 Bottom row: H. F. Baldwin, W. K. Callahan, J. P. Harding.

V. L. CLUB PICTURES TAKEN IN THE EARLY 'EIGHTIES

added greatly to her income. Breakfasts we took at our rooms or wherever we might choose; luncheon we ate at the Carrolton table d'hote, but dinner was served in our private room on the second floor.

Whenever the Mapleson Opera Company came to town, all the Italian members of the troupe came to the Carrolton and the low ceilinged room assumed a truly foreign air, filled as it was with men and women all speaking their native Italian, interspersed here and there with the regular habitués, the artists, Munzig and Porter, the violinist, Adamowski, and Dr. Morton Prince, not to mention our own V. L. crowd.

Those were, indeed, happy days and nights, especially when we all trooped down to the old Boston theatre and "suped" for the Mapleson Company. One evening I remember well when four of us, all six-footers, were chosen as palanquin bearers for a "fairy," as told us by the stage manager. Bunce and I, together with two others whose names have gone from me, were the ones selected and imagine our dismay when we learned that the "fairy" in question was none other than Madam Fursch-Madi, a German heavyweight of well nigh 175 pounds! She took her seat on the palanquin, we raised it to our shoulders and bore her triumphantly to the footlights—there to remain indefinitely, for we had no other orders. I recall standing (I was in front) for some time, when on looking round I noticed that Madam was getting uneasy, speaking volubly in Italian and trying to stand up. Del Puente, one of the troupe, was at my right, trying to give me instructions in Italian, and, as all I could make out was "basso-basso," I concluded the lady wished to descend, so with a sign to the other bearers, we let her down gently, and then faced about to withdraw to the wings. We had come in over a narrow bridge and naturally took this course on retreating, only to find our way blocked by Senor Ravelli who, head in air, was singing a love song to Fursch-Madi. How we got off finally I do not know, but we four were the butts of many a joke about our palanquin and the "fairy" for days to come.

Every member of the "regular," as well as "special" section, had his title and office as well as number—this latter used to collect the crowd after theater or elsewhere. If scattered, each member raised his voice in a guttural "Hi there," giving his number, and gradually the whole force was collected and we would march through the throng singing—with lock step and arm on shoulder.

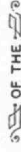


"Forsan et haec olim meminisse juvabit."



"TECH" MINSTRELS

GIVEN UNDER THE AUSPICES



OF THE



V. L. CLUB

FOR THE BENEFIT OF THE

M. I. T. ATHLETIC CLUB.

The Union Hall, May 1, 1883.



COMMITTEE.

H. WARD LEONARD, Chairman.

J. P. HARDING, Secretary and Treasurer.

J. G. EPPENDORFF, Stage Manager.

J. PIERCE, Jr.

I. W. LITCHFIELD.

W. E. SPALDING.

FRANK TENNEY.

W. L. O'BRIEN, Jr.



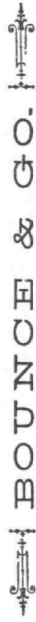
* BONES	* W. E. SPALDING.
* J. P. HARDING	* I. W. LITCHFIELD.
* R. W. HARDON.	* J. Pierce, Jr.
* T. W. Fry.	* E. B. Homer.
* H. WARD LEONARD.	* C. H. Tompkins, Jr.
* R. Pike.	* H. G. Marshall.
* A. H. Brown.	* F. B. Richardson.
* TAMBOS	* FRANK TENNEY.



P A R T I.

OVERTURE AND CHORUS	- - - "Moonlight on the Lake."
QUARTETTE.	
PRESIDENTIAL SONG	- - - "Arthur and Martha."
NAUTICAL BALLAD	- - - "Sailing."
PLAINTIVE ANDANTE	- - - "Tidings of Comfort and Joy."
BLIZZARD	- - - "I'll meet her when the Sun goes down."
BALLAD	- - - "Only a Pansy Blossom."
SNARK	- - - "Melissa."
BASS SONG	- - - "Monks of Old."
	- - - E. B. HOMER.

THE FIRST PART TO CONCLUDE WITH



By SPALDING, RICHARDS, and HARDING.

Grand Congress of inimitable artists collected from Europe, Erope, Irope, Orope and Salem.

GUILLAUME, MARQUIS d' O'BRIEN
In his Obfuscating Corporal Convolutions.

Zither Solo - - - **R. E. RICHARDSON.**

Our \$400 a week sketch artists in an amusing mélange of character acting, entitled
LOU RILEY. {THE LIVELY NIGS} BOB DE COSTER.
During this act Mr. Riley will change the expression on his face without leaving the stage.

Banjo Duet - - - **Messrs. PERKINS AND KINGSBURY.**

BONEY BILLIE, THE BULLY BONE BEATER,
In his blood-curdling feat of disintegration, in which, without the aid of a net, his body remains on the stage, while his bones dance in mid-air.
BILLIE SPALDING, commonly known as

RILEY AND O'BRIEN.
The Great Salutatorial and Mimetic Artists

OLD EPH'S RETURN.
Magnificent tool enscramble. (That word is French.)

UNCLE EPH.....**FRANK TENNEY**
SUNT DINAH.....**CHARLIE BROWN**
PETE.....**F. B. RICHARDS**
Old Eph's Children, Neighbors, Dudes, Sub-dudes, Hoo-dudes, &c., &c.
To conclude with a

General Walk-around.

Ushers will arouse the audience every um-teen minutes. Laughing Gas on tap in the Lobby: some weaker for smiles at diluted rates.

I think the V. L. Minstrel Show given at the Y. M. C. A. Hall on May 1, 1883, was the first effort of its kind in Tech annals, and well do I recall the rehearsals in the new Mechanics' Building out on Huntington avenue. Spaulding—Boney Billy, the Bully Bone Beater, with his wonderful skill and sleight of hand; O'Brien, in his famous song and dance, the "General Walker ound" at the end—all these you may recall from the reproduction of the program on another page.

Each night at dinner, the I. T. (Inspector of Tiles) would report whether any member had purchased a new hat. If so, drinks were on the member, but if the I. T. failed to discover the new tile, he it was who suffered the penalty.

Our club pin was a gold candlestick surrounded by the letters V. L., and in the tintype here reproduced you see Tompkins holding the battered emblem over which many a hard battle was fought.

Joe Pierce was B. S. (Bougie Snuffer) the first year, and it was his duty to properly snuff out the candle whenever anyone attempted to light his cheroot. Naturally he was helped in every way by the other members and woe betide the fellow holding the bougie when the light went out, for it meant either a fine or drinks for the crowd, as determined by our chief, Herr Leinhardt (Leonard), sitting at the head of the table, who was always addressed as "D. M.* Your Excellency," accompanied by a low bow and a double salute.

Jack Harding, special architect, '85, held the post of A. M. (Action Master), whose duty it was to provide or suggest the entertainment for the evening, and well did he fill the position. Ingenious and full of ideas, he set a wonderful pace, and there were few nights, except just before exams, when we all dispersed quietly to our rooms for study.

The V. L. crowd may have had a bad name among the Faculty, and certainly many of the boyish pranks of the day could be traced to its members, but our spirits had to have some outlet and if, by our efforts to create a social and friendly atmosphere even among a small group of students, we helped the coming of the Tech Club and later social organizations, truly our little dining club did not exist in vain.

J. G. EPPENDORFF, '83.

*"D. M." stood for double magnum,



PHOTOGRAPH OF THE SECOND TECH BOARD (The first board was not photographed)

Standing: Frank Tenney, Walter H. Bunce, J. G. Eppendorff, Roland G. Gamwell, G. L. R. French, Frederic L. Smith,
Sitting: T. W. Robinson, Arthur D. Little, I. W. Litchfield, H. Ward Leonard, Harvey S. Chase, Horace B. Gale, Frank
L. Locke, Geo. J. Foran.

Sitting on the floor: Robert W. Hardon.

HOW "THE TECH" WAS STARTED

Sketch of the early history of the undergraduate publication written soon after it was founded

It seems appropriate to chronicle in this reminiscence number, events connected with the founding of *The Tech*. The following is taken from the first *Technique*, published by the class of '87:

It was certainly a very modest beginning, and I find myself smiling at this little brown-covered magazine, with its sixteen pages that I once knew by heart; but it was a beginning, and as such the same feeling of fatherly pride comes over me that we fellows enjoyed when this identical copy came fresh from the printers. It would be difficult to determine, exactly, who founded *The Tech*; but certain it is that H. Ward Leonard, '83, was the leading spirit, and A. W. Walker, '82, an able and earnest coadjutor.

After the waning of the *Spectrum*, which went out with the class of '74, there were periodical attempts to start a paper, but they failed for lack of support.

The fall of 1881 brought with it a large and enthusiastic class; many important improvements were contemplated at the Institute. About October 15 a mass meeting was held in Room 4, Rogers, now Room 15, which was packed to overflowing. A committee was appointed, and a week later their plans were submitted and adopted at another rousing meeting. The first Board of Directors and editors was as follows:

Directors: H. Ward Leonard, '83, president; Henry F. Ross, '82, secretary; I. W. Litchfield, '85, treasurer; Walter B. Snow, '82; H. B. Gale, '83; A. Stuart Pratt, '84.

Editors: Arthur W. Walker, editor-in-chief; G. W. Mansfield, '82; George J. Foran, '83; F. F. Johnson, '84; Arthur D. Little, '85; Harvey S. Chase, civil and mechanical engineering; Grenville Temple Snelling, architecture; Charles H. Tompkins, Jr., mining and chemistry; R. Tilden Gibbons, sporting editor; Samuel M. Munn, general advertising agent.

The first issue came out on the day before Thanksgiving, four years ago. The assistance of the football team was necessary to conduct the papers in safety to a little room way up under the

roof where they were distributed. Ah, but that was a triumph for you! An immense table barricaded the open door, and behind it were assembled the entire directorial and editorial boards. How every line and point in the make-up was discussed, and how keenly we relished the jokes and cuts which now aggravate my rheumatism every time I look at them! It was glory enough to stand there and pass out the papers to the howling mob that blocked the halls and five flights of stairs.

Thus *The Tech* started. It has been successful beyond expectation; but only a few who are acquainted with its inside history know the many hours and months of work that has made it what it is, and on more than one occasion it has seemed as if the only reward would be certain failure.

The events of Commencement Day, 1882, are impressed so vividly on my memory that they can never be forgotten.

It was in Huntington Hall, on that day, that ex-President Rogers died while addressing the graduating class.

It was Decoration Day; and as no reporters were present I was anxious to get as full a report for *The Tech* as possible. I was bending over my notes, when suddenly there was an impressive pause—it seemed for a moment as if all held their breath. As I looked up my first impression was that the stage had given way: Professor Rogers had fallen, and graduates and professors had risen half-way in their chairs of one accord. For a moment every one was paralyzed. Those nearest sprang forward to render assistance—but the need had gone; the simple, noble spirit that a moment before had breathed in the words still fresh in my notebook had left the body forever.

Tenderly they lifted and bore him away; softly the audience dispersed; and in a few moments the hall was deserted, save by the gloom of the shadow of death.

There was a strange coincidence connected with the sad death of Professor Rogers. As I entered the hall, I noticed that the clock directly opposite the stage had stopped, and the hands pointed to twelve. It was within a few minutes of noon that he died.

Notwithstanding a few unkind and undeserved sentiments that have crept into print, the Faculty and assistants have always been on the most friendly terms with the paper. Professors Nichols, Atkinson, and Cross were almost constant contributors

to the column of books and periodicals for reference, and that of M. I. T. publications. Professor Rogers was much interested in it, and inclosed his subscription in a kind note. Professor Runkle was always a well-wisher; and an occasional twinkle would steal through two pairs of glasses when he made some charitable allusions to its contents in the class-room.

It is to President Walker that we owe the room *The Tech* now occupies.* For some time after we were obliged to give up the top story, we took possession of the reading-room. I was on the room committee; and although the executive had no place to give us, we regularly haunted his room twice a week. The courtesy and many kindnesses we received made it seem almost an honor to be put off.

Nearly all the professors have been contributors to the paper, the only titled individual from the outer world being the Hon. General Daniel Pratt.

At one time there was a mythical personage in the mining laboratory who went by the name of Hadley. In response to a kind notice posted on the bulletin several freshmen ('86) sought him in that lower region, and procured passes to the fair.

A few days after the following notice was found in the letter-rack:

MR. J. G. HADLEY:

BOSTON, Oct. 7, 1882.

Dear Sir—Passes bearing your name, "on account of Hadley's contract for M. I. T. Freshmen," are being presented. No officers of this corporation are aware of any contract with you. We therefore decline to honor these passes, and await your explanation.

Yours truly, J. T. WOOD,

Secretary and Gen'l Manager, Institute Fair.

Another unique communication directed to the "Machinery School, Boston," ran as follows:

STATE CENTRE, February 21st.

Will you please tell me how Your institution is run and what its ame is and if You Would experiment on Preptual motion for half the enterprise in the united States if You had a good theary advanced that looks reasonable and the cost would not be more than the cost of a dump-cart.

Yours truly, ————.

Marshall County, Iowa.

I. W. L.

* 30 Rogers.

Members of the First Graduating Class

At the Reunion in June there will be a larger number of the class of 1868 than has appeared at a Tech function since that time. The class is taking the greatest interest in the celebrating of the Fiftieth Anniversary of the Institute and the dedication of the new buildings, and they may be assured of a warm welcome wherever they may be. A special badge is being designed for this class, as the class of honor, and wherever this badge is seen, the bearer will be treated with respect and affection.

The living members of the class, for whom we have addresses, are as follows:

Ellery C. Appleton, Mattox, Fla.; Nathaniel W. Appleton, Blakesmere, East Pepperell, Mass.; Edward C. Bates, 122 Marlborough St., Boston, Mass.; Stuart M. Buck, Bramwell, W. Va.; Whitney Conant, 158 Ellison St., Paterson, N. J.; Joseph H. Curtis, 220 Devonshire St., Boston, Mass.; Eli Forbes, Lancaster, Mass.; Louis Higginson, Waterford, Me.; William J. Ladd, 311 Sears Bldg., Boston, Mass.; John M. Little, 74 Boylston St., Boston, Mass.; Robert S. Peabody, 22 The Fenway, Boston, Mass.; Prof. R. H. Richards, 32 Eliot St., Jamaica Plain, Mass.; Edward S. Safford, 2 West High St., Somerville, N. J.; Eben S. Stevens, Quinebaug, Conn.; William E. Stone, 50 Congress St., Boston, Mass.; John D. Twombly, Winchester, Mass.; Daniel M. Wheeler, 230 Forest Park Ave., Springfield, Mass.; George A. Whitney, 592 Adams St., Dorchester, Mass.

Advertisers Appreciative

The value of the REVIEW as an advertising medium is beginning to be recognized by the public. It is true that our advertising has steadily grown on a straight business basis, but the magnitude of the new buildings and the work that Technology has been doing has called the attention of advertisers to the REVIEW, and in this and subsequent issues will be found new advertisements of concerns whose products will appeal to Technology alumni. The men who read the TECHNOLOGY REVIEW are largely buyers or influence buying. The audience that advertisers can appeal to through the REVIEW is unusual in its character and potentiality. The rates are very reasonable and the circulation growing steadily and surely.

An Unusual Tech Show

The Tech Show this year is to be radically different from anything that has gone before. In response to a demand for a book having more local character, this year's show has been written about an episode connected with the Institute. The title is "*M-34*," which is the number of an imaginary course. Although the play is in the form of a musical comedy its treatment is quite original and it has many new and unusual features. The scene shifting will be done entirely by the students, which will make possible the presentation of the ten scenes without interruption of the plot. All the scenery for the show has been designed and painted by a committee of undergraduates. The costumes are also of original design. Samuel V. Hume of Cambridge will again be the coach.

The alumni performance of the show will be given on the evening of May 6, and invitations will be sent out in ample time.

Loving Cup to Professor Allen

A complimentary dinner was given February 18 at the City Club to Professor Allen, who is retiring from the instructing staff at the Institute of Technology, by the visiting committee of the Technology Corporation and the instructors of the Civil and Sanitary Engineering Departments. The speakers were President Maclaurin, Professors Dwight Porter, George F. Swain, C. B. Reed and Dean Burton. Desmond Fitzgerald of the visiting committee, on behalf of the committee and the instructors of the courses Professor Allen was connected with, presented him a loving cup suitably inscribed, to express their appreciation of his thirty years of faithful, untiring and efficient service.

Meeting of the Association of Class Secretaries

On Tuesday, March 14, there was an enthusiastic meeting of the Association of Class Secretaries to make class arrangements for the Technology Reunion in June. Reports from the secretaries showed that the alumni were making arrangements to extend the hospitality of many homes to visiting classmates. The assignments for the class dinners were made, and the various features of the program discussed.

TECH MEN IN THE PUBLIC EYE

HARRY W. TYLER, '84, professor of mathematics at the Massachusetts Institute of Technology, was elected secretary of the American Association of University Professors at the annual meeting.

PAUL HANSEN, '02, engineer connected with the Illinois State Water Survey, Urbana, Ill., has recently been made chief sanitary engineer of the State Board of Illinois, with residence at Springfield, Ill. After leaving the Institute Mr. Hansen was connected with the Massachusetts Board of Health, the design of the Columbus, Ohio, Filter Plant, was assistant engineer with the Ohio State Board of Health, and later sanitary engineer of the State of Kentucky.

DONALD B. ARMSTRONG, '13, director of the Department of Social Welfare of the New York Association for Improving the Condition of the Poor, has, with Mrs. Armstrong, been awarded the prize of \$1,000 offered by the Metropolitan Life Insurance Company for the best pamphlet on social hygiene for boys and girls. Dr. Armstrong came to Tech with a Ph.B. from Lafayette, and an A.M. and M.D. from Columbia. At the Institute he received the degree M.S. in biology and public health.

GEORGE W. SIMONS, '15, an assistant in the Department of Civil Engineering at the Massachusetts Institute of Technology, has recently been appointed chief sanitary engineer of the State Board of Health of Florida. He will take up his new work in July.

ALEXANDER RICE MCKIM, '85, was elected president of the New York State Engineer Reserves, which organized March 21. The organization will comprise the entire state.

HENRY P. BENSON, '86, has recently been made mayor of the city of Salem, Mass., succeeding the Honorable Daniel M. Little of the class of 1883. Mr. Benson has been identified with Boston and Salem business affairs for many years. He is a director of the Naumkeag Cotton Mills, the Naumkeag Trust Company, and trustee of the Salem Savings Bank, and is interested in a number of other local institutions.

CHARLES H. WOODBURY, '86, has an interesting collection of etchings on exhibition at the Library of Congress, Washington, D. C., under the auspices of the Division of Prints. The art critic of a Washington paper speaks of this contribution as follows:

"Mr. Woodbury is much better known as a painter than as an etcher—indeed, many who are familiar with his paintings will be surprised to know that he does etch, but this collection now on exhibition places him among the foremost etchers of our times if not of all time.

"The sea and mountains have for some years been Mr. Woodbury's favorite themes. There is a kinship between these two great manifestations of nature both in sense of vastness and strength and this Mr. Woodbury has felt very keenly and interpreted in his paintings. It is this same feeling which is to be found in his etchings and even in a more impressive form. An etching always seems to be the essence of things felt but unsaid, and thus these etchings of Mr. Woodbury's are really eloquent. He pictures the stern rock-bound coast of Maine with a few lines and gives an adequate impression of its bold grandeur; with a few more lines he brings before our vision the open sea and awakens the same sensibility that the limitless, restless waves themselves may have stirred; he gives a picture of the mountain tops and the observer is bound to comprehend their lofty stateliness; or he presents a scene on the beach and instantly one is transported to the gayest center of an American summer resort.

"And what is most interesting is that all this is accomplished with rather rugged lines and almost rude simplicity. This is something more than skill; it is mastery and of a kind which is rare. Here is a man with the artist's vision who has something to say and knows how to say it. His way is his own and his message is very worth while. This is modern art and art which is essentially American; it is vital, forceful and sincere. In one of these etchings no larger than a man's hand there is as much as in a painting many feet in dimensions—indeed, much more than in most paintings."

ALUMNI ACTIVITIES MANIFOLD

Compare this symposium with the interest three or four years ago — Reunion chief item of interest

THE M. I. T. CLUB OF AKRON.—Despite the fact that business was never better in Akron and everybody is head over heels in work doing his share and gathering in his spoils, we have continued our meetings and the club is alive and fostering much enthusiasm for the Reunion in June.

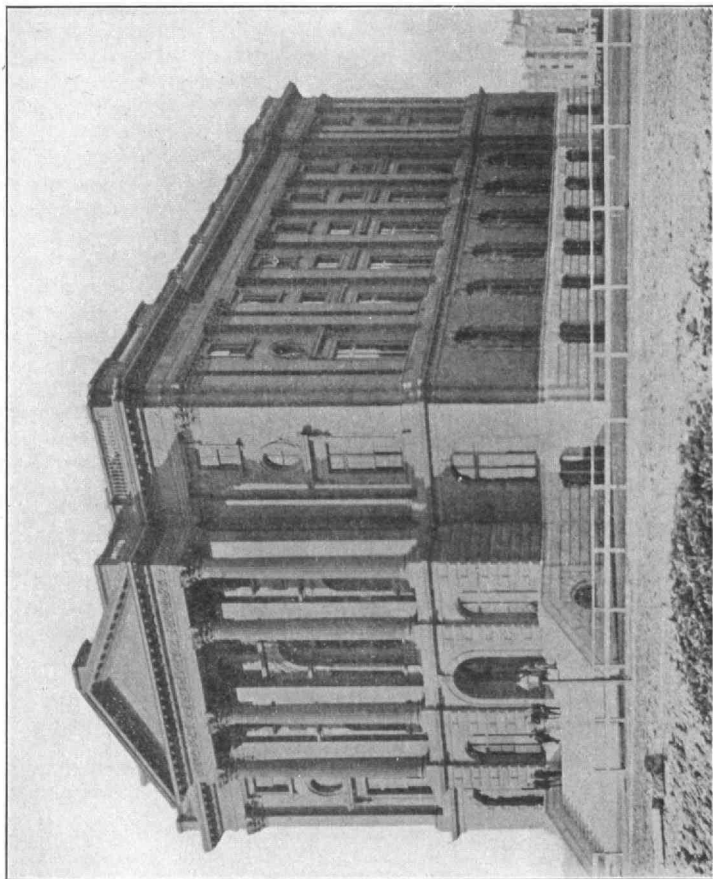
We have been fortunate in hearing, first hand, something about the above mentioned "big party." Henry A. Morss, '93, was present at the meeting of the Northern Ohio Technology Club and, in connection with showing a fine collection of lantern slides, gave us a most interesting talk on the plans being made for the Reunion and what we may expect when we get there.

On January 26, Professor E. F. Miller, '86, was in Akron and was our guest at an informal dinner at the University Club. Following the dinner, during which the favorite songs and yells (not excepting the famous Course II yell), were given, Professor Miller entertained us with a talk such as he, and only he, could give. The worries of rubber in all of its forms and with its details were cast entirely aside for the while and we were again back at the 'Stute, weighing boiler feed water and letting the tanks run over on some poor soul beneath, figuring on power plants, weirs, thermo, etc.

Professor Miller handled the subject of "The New Tech" in an entirely new way to all of us and went into the most interesting of even minute details of the plans of the different departments. The new machines, canals and hydraulic apparatus, drawing rooms, power plant, library, etc. were discussed and it was voiced by all that they had spent one of the most interesting evenings of their lives. "Deelighted," to say the least.

Twenty-five members were present and we regret that more could not have taken advantage of this opportunity.

It is intended to have more of these meetings along with our regular monthly luncheons which come on the first Saturday of each month. Our next dinner will be held on the 16th of February at the University Club and we will have as our guest, Mayor Laub of Akron. Mayor Laub is indeed a conscientious and live worker



EARLIEST KNOWN PHOTOGRAPH OF ROGERS BUILDING, TAKEN ABOUT 1870

The houses in the background are on Beacon Street

for the betterment of Akron, which city, we will have to admit, is in need of just such a man. He has some big problems before him but he is determined to solve them and is going to tell us of his plans of attack. This meeting promises to be popular and very much worth while.

Several new members have come to the club lately and some have moved away, but we are growing in size as well as in spirit, (not liquid).

The meeting of February 16 was indeed all and even more than was expected. Mayor Laub spoke to nearly thirty Tech men on his problems as mayor and his method of solving these problems. He appealed to the technically trained young man to give a little of his effort to civic affairs and said that well thought out suggestions and plans were of great help to the administration. They as well as others were apt to see their actions and plans in only one light and, unless actively supported by the people with their own ideas, they might not benefit the greatest number in the most efficient way.

He emphasized the point that clubs of energetic young people should get together for occasional discussions of the city work and needs and then submit their findings to the administration. In this way they would do a great deal of good besides informing themselves of what is going on about them and in that which they should rightfully have a part.

This plan was considered by the club and heartily endorsed in short talks by our worthy president, W. H. Eager, '04, the president of the Northern Ohio Technology Association, P. W. Litchfield, '96, and Dr. Geer, a Cornell alumnus, as well as by a motion which was passed by the club, to have occasional meetings for the study of civic questions.

With the above mentioned action, Mayor Laub was given to understand that the Tech bunch was back of him and that he had started something which might not be so easily stopped.—*H. W. Treat, '14, Secretary, Goodyear Tire and Rubber Co., Akron, Ohio.*

TECHNOLOGY CLUB OF THE SOUTH.—At a smoker of the University Club held at the Cosmopolitan Hotel on the 12th of February the following Tech men were among those present:—F. J. Van Hook, '06; J. L. Porter, '00; M. H. Goldstein, '04;

W. S. Resor, '93; J. P. Labouisse, '93; Marvine Gorham, '93 (of Detroit); David Schwartz, '97; J. C. Wilson, '07; J. H. O'Neill, '10.

The coming Reunion was discussed, but Van Hook was the only one of those present who has, as yet, definitely planned to attend.—*J. H. O'Neill, '10, Secretary, State Board of Health, New Orleans, La.*

SOUTHWESTERN ASSOCIATION, M. I. T.—The Kansas City alumni of the Massachusetts Institute of Technology elected officers January 15. Frank Cushman, Jr., '01, was named president, Albert Lombard, '02, vice-president, and Hermann C. Henrici, '06, secretary and treasurer.—*Kansas City Times.*

THE TECHNOLOGY CLUB OF LOWER CANADA.—*Annual Meeting (Adjourned from September 25, 1915) and Smoker.* The annual meeting of the club was held at the St. Regis. In the absence of the president, the meeting was called to order at 9.45 p. m. by the vice-president. The minutes of the last meeting were read and accepted.

It was proposed by E. C. Richardson, '07, and seconded by G. A. Crane, '07, that the secretary be instructed to cast a ballot for the following officers for the ensuing year: President, H. O. Keay, '00; vice-president, G. R. Heckle, '99; board of governors, F. J. Friedman, '08; D. J. Spence, '97, and S. P. Brown, '00.

This motion was unanimously carried and above officers declared elected.

There was a general discussion of the advisability of renewing the weekly luncheons. Motion by Mr. Brown that question be left to the Board of Governors as to date and details, seconded by Mr. Heckle. Motion was carried unanimously.

It was proposed by Mr. Heckle and seconded by Mr. Friedman that the president appoint a committee of four including himself to look into the matter of a mascot for the Tech Reunion at Boston in June. Motion was carried.

The president appointed S. P. Brown, '00, L. J. T. Decary, '05, and G. R. Heckle, '99, to serve on the above committee with him.

It was suggested to the Board of Governors that one more meeting at least should be held before the June Reunion.

An expression of opinion asked for by the president as to the in-

tentions of the members regarding the coming Reunion, brought forth the fact that eight of those present were planning to be in Boston in June. The meeting adjourned at 10.30 p. m.

The following men were present at the above meeting and smoker:—E. E. Wells, '09, E. C. Richardson, '07, H. O. Keay, '00, L. J. T. Decary, '05, G. A. Crane, '07, F. E. Came, '81, H. O. Blatt, '04, S. P. Brown, '00, E. B. Evans, '06, F. J. Friedman, '08, G. R. Heckle, '99.

Cards and singing were enjoyed by the members until a late hour.—*E. B. Evans, '06, Secretary, 357 St. Catherine Street, West, Montreal, Canada.*

BERKSHIRE COUNTY ALUMNI ASSOCIATION OF M. I. T.—We had a meeting at the Park Club on the 20th of January when the slides of the new 'Stute were shown to eighteen Tech men. Those present were: J. McA. Vance, '91, A. E. Truesdell, '89, W. R. Thomas, '87, W. M. Stearns, '96, H. M. Seaver, '97, W. L. Root, '96, C. W. Power, '89, G. L. Mower, '07, P. F. McLaughlin, '08, W. C. Lovell, '13, E. A. Jones, '87, G. C. Harding, '89, E. C. Groesbeck, '06, P. Frederick, '07, W. N. Eichorn, '14, G. A. Curtis, '04, A. R. Childs, '02 and E. E. Ferry, '12. The men took a fall out of a good dinner and then, while enjoying their smokes, discussed the concert which would be given soon by the combined Musical Clubs of M. I. T. Later the meeting adjourned to a side room where views of the new Technology buildings were shown. While on this subject, let me drop a hint to the other associations to get busy and use those slides as they are one of the finest lot of slides that it has been my good fortune to see.

On Thursday, the 3d of February, we were entertained by the Musical Clubs of Technology, in the Masonic Temple in Pittsfield. The affair was very successful and we discovered two more Tech men the night of the concert. The concert itself was called one of the best college entertainments ever offered in this city. We ran against some competition that hurt us and, as a result, the financial end of the game was not up to scratch.

We expect to have our next meeting some time in March and will then be able to tell you about how many men to expect at the Reunion in June. If you see any Berkshire County Tech men who have not joined us tell them to get in touch with me right away.—*Earl E. Ferry, '12, Secretary, 40 Center Street, Pittsfield, Mass.*

THE TECHNOLOGY CLUB OF ROCHESTER—held a meeting and dinner February 4, at the Rochester Club. Professor Harry Tyler, '84, was the guest of the evening and entertained the club with an informal talk, illustrated by slides, on the new dormitories and the Walker Memorial.

Before the dinner Dr. Tyler astonished the club by recognizing and calling by name several old graduates whom he had not seen for twenty years.

Professor Tyler arrived in time to spend the afternoon inspecting the research laboratory of the Eastman Kodak Company and also visited the University of Rochester.—*W. G. Bent, '05, Secretary, Kodak Park Works, Rochester, N. Y.*

TECHNOLOGY CLUB OF NORTHERN OHIO

YO HO, SKINNEY!

Run LiKe EVERyThiNg! Wun of Those BIG Times!

YOu KnoW!

ReguLAR JamborEE of The

TEKEDNOWLUGY KLUB OF

NORTHERN OHIER

Hermit Klub IN Kleveland,

2051 EaSt Thurd PlacE.

LOOK WHATS COMIN OFF!!!

PikchuRes of The New Tekednowluga.

Grate HoT Air by Ex-Main GlnK Fay SMYthE.

Sum MoRe by BiG CheeSe LitcHfiELD.

MusiK all the TimE, alSO OthERthingS.

HandSum Larry Odell has sumthin to Say aBOUT
the WiLd Men of BorNEO.

The Kleveland ContinguNT havE an IdeaR or too
aBOUT stopPINg the War by Sir Tiler Percival
Karlysle and Sir Archibold EicHER and MaybE
Hon. Geo. GLOver.

Thru DaRkeST AfriCa. PersonALLY Conducted by
Sum of Our ProMinunt MemBERS.

So theRe wiLL be PleNty of VarietY.

SeE you thEre SkinNey!

O Yes, Most Forgot, \$3.00 per, \$2.00 for Classes of
1913, 1914, 1915. Nix on the fancy Dress stuff.

REMEMBER, JANUARY 15, 6.30.

Responding to the above inspiration an army of Institute Fun Followers gathered at the quaint old Hermit Club for an evening of sport and fellowship.

Paul Litchfield, '96, acted as toastmaster, and the guest of honor was Henry Morss, '93, of Boston. Music was furnished by a 60 horse-power Dark Town String Quartet whenever the vocal efforts of the diners—ably lead by Joe Dunlap—permitted. Many impromptu songs and speeches directed at some wayward member enlivened the periods between courses. After the dinner, discussion was led by Messrs. P. W. Litchfield, '96, F. A. Smythe, '89, A. T. Hopkins, '97, and H. W. Treat, '14, on the coming Technology Reunion and much enthusiasm was in evidence.

Henry Morss gave a complete talk on the building of the new Technology which was well illustrated with stereopticon views sent forward from Boston.

Larry Odell, '12, followed with an interesting description of his recent trip to the Far East among the rubber plantations. His talk was also illustrated with slides.

The evening was concluded by a lecture entitled "Through Darkest Africa" elaborated with thumb nail sketches and tone illustrations. The lecture described an expedition formed by Technology men at the request of the United States Government headed by F. A. Smythe, which was sent out in quest of the Great Saharan Wild Bull, and covered completely every detail of the wanderings of the party from Boston to New York and across the Atlantic and up into the Wilds of Africa depicting many tremendous adventures and hair breadth escapes and the final capture of the Great Bull.

The following is a list of those who attended the dinner:—A. M. Eicher, '12, G. W. Bowers, '09, O. S. Pulman, '06, R. L. Hubby, '94, H. W. Treat, '14, C. R. Johnson, '11, R. T. Haslam, '11, J. H. Dunlap, '11, W. A. Snow, '14, G. T. Glover, '08, A. L. Patrick, '94, A. D. Hatfield, '93, A. T. Hopkins, '97, F. A. Smythe, '89, H. A. Morss, '93, P. W. Litchfield, '96, H. B. Dates, '94, R. H. Danforth, '98, E. J. Wilson, '04, R. I. Bailey, '12, G. W. Richards, '12, L. A. Roby, '75, R. B. Fay, '05, Wm. H. Lambirth, '96, J. D. Littlefield, '94, G. W. Sherman, '94, M. Sutliff, '99, W. R. Strickland, '98, G. E. Merryweather, '96, T. W. Carlisle, '10, A. A. Gould, '10, A. W. Spicer, '13, R. W. Ferris, '08, M. Hellman, '96, F. Metcalf, '90, L. G. Odell, '11, C. E. Stamp, '96, C. E. Hollander, '96, V. G. Katzenstein, '13, E. H. Weil, '13, G. H. Shaw, '04, K. Whitman, Jr., '05, D. P. Rogers, '15, Don Stevens, '11, W. R. Hanchett, '15, A. D. Wheeler, Jr., '15, W. P. Keith, '14, P. L. Small, '15, H. S.

Alexander, '11, A. E. Bradley, '11, A. M. Dean, '05, H. O. Isenberg, '06, C. Brown, '99, F. H. Rose, '91, R. W. Pratt, '98, W. P. Colbert, '00, A. B. Newhall, '99, L. E. Wright, '13, K. W. Reed, '13.—*Donald R. Stevens, '11, Secretary, Goodyear Tire & Rubber Co., Akron, Ohio.*

NORTHWESTERN ASSOCIATION M. I. T.—At the annual dinner of the association held at the home of the Chicago Engineers Club the members listened to and looked at a most able and interesting presentation of the New Technology plans by Field Manager I. W. Litchfield, '85. Mr. Litchfield was liberally supplied with slides illustrating his remarks and with his usual jollity supplementing the illustrations. His description of the coming Reunion has inspired in us all a most intense desire to attend and we immediately put the matter of organizing the expedition in the hands of our Booster-in-Chief George B. Jones.

Prayers are requested that our country may not become involved in war, at least until after the Reunion, because some twenty or thirty of our members belong to local organizations of Artillery and Engineers Corps which are liable at any moment to be mobilized in the cactus fields.

At the annual meeting officers were elected for the coming year as follows: President, Harry M. Montgomery, '79; vice-president, Frank F. Fowle, '99; directors, John M. Fitzgerald, '02, Harold Lockett, '10, Daniel A. Tomlinson, '12; secretary-treasurer, Harvey S. Pardee, '09. The administration immediately initiated plans for a more formal and effective organization as a means of increasing the power and prestige of the association. It is the intention, as far as possible, to take an active and serious part in those things which affect the welfare of the Institute. The following are among the important committees formed:

Committee on attendance, to undertake the mobilizing of the membership into an effective and coöperating agency. Committees on program, speakers, and reception, to lay out and conduct the activities of the association and to promote fellowship and acquaintance. Committee on *Monthly Bulletin* to determine the practicability of publishing a periodical devoted to the work of the association. Committee on directory, to prepare and publish the Annual Directory. Committee on Reunion, to consider in detail the organized efforts of the association in attending the coming

Reunion. Committee on Institute affairs, to keep in touch with the activities of the Institute in all its branches and to express by resolution the opinion of the association members as regards Institute affairs. Committee on preparatory schools, to advertise in the most effective manner the courses offered at the M. I. T. and the superior opportunities of training and instruction given at our Alma Mater. Also to encourage students of the better type to go to Tech.

The Northwestern Association originally included in its scope all former students and alumni in the West. With the formation of local clubs in most of the important central and western cities the limits of this association have gradually been drawn in to include only Chicago and vicinity with a non-resident list extending generally throughout the state of Illinois, part of Wisconsin, Indiana, and Iowa. The present resident membership numbers 400, of whom nine are women. There are approximately 75 non-resident members.

The association has always been informally organized with the privileges extended to all graduates, former students or instructors of the Institute irrespective of the payment of dues, which are small and practically voluntary. The secretary would like to receive the names of all new members in order that the proper data blanks may be made out.

The activities of the association include, besides the annual dinners, the summer outings, and special meetings, a weekly luncheon program for the promotion of loyal fellowship and usually to listen to a speaker of the day. We have been most fortunate in making an arrangement with the Chicago Engineers Club, whose membership list includes many on our own roll, whereby the weekly luncheons of the association will be held hereafter at the Chicago Engineers Club, 314 Federal street, Chicago, each Tuesday, at 12.30 p. m. All Technology visitors to the city are urged to keep in mind this day and place of meeting and encounter our Reception Committee which is prepared to welcome them.

Tuesday, March 21, Professor C. Frank Allen, who introduced himself as "Allen, '72," paid us a welcome visit. Professor Allen related an interesting account of the doings at Tech among the saddest of which was, to us, his report of the retirement of many of the older professors. However, the circumstance was mitigated

somewhat when Professor Allen stated his opinion that the older men ought not to hold on so long anyway, that it was better to allow the heads of the departments to reach their positions at a younger age than has hitherto been possible, as a rule. Anyway, God bless 'em, they cannot retire from their positions in our affections.

Professor Allen told of his summer camps, of the beneficial effect on mutual fellowship between the teacher and his boys, of some experiences in keeping embryo railroad engineers on the track of duty instead of the pathways of femininity while *en route* to camp. Then he tried to tell of the pageant at the coming Reunion, but failed on account of the limits of the English vocabulary, and finally he told us of his book to be, on *Engineering Law*, which seemed to be unique, and all determined to have one. Professor Allen brought along plenty of the old salt air of Technology, all right, and we hope he comes to this village again.

Resolutions on the Death of Frederick W. Clark

WHEREAS, The Northwestern Association of the Massachusetts Institute of Technology has, through the death of Frederick W. Clark, lost one of its most genial and popular members and one who always retained an active interest in the affairs of the association, and

WHEREAS, The individual members of the association feel his loss personally and share with his family the sudden and great sorrow brought upon them,

Now, therefore, we, the officers and executive committee of the association, acting for the organization as a whole, hereby convey to the immediate family and relatives of our beloved ex-president, the sincere sympathy of our membership, to which we add our personal expressions of regret and sorrow.

The secretary is requested to forward this resolution to the family of the deceased and to inscribe a copy on the records of the organization.

KENNETH LOCKETT, *President*.

A. M. MONTGOMERY, *Vice-President*.

GEO. B. JONES, *Secretary-Treasurer*.

Executive Committee:

H. S. PARDEE.

PHILIP W. MOORE.

JOHN M. FRANK.

CHICAGO, ILL., February 7, 1916.

—H. S. Pardee, '09, *Secretary*, 604 East 50th Place, Chicago, Ill.

TECHNOLOGY CLUB OF ALBANY AND SCHENECTADY.—The Massachusetts Institute of Technology alumni in this city and vicinity gathered at the Mohawk Club last night to listen to a talk

by I. W. Litchfield, '85, field manager of the Institute. He told the men what is being done at M. I. T. It was one of the most spirited gatherings the M. I. T. men have had in some time. President R. C. Robinson, '01, presided and those present were: M. W. Sage, W. C. Arsem, H. B. C. Allison, C. N. Draper, R. C. Robinson, E. F. Dutton, O. R. Clark, N. A. Lougee, P. P. Greenwood, W. C. Taylor, A. L. deRomana, N. J. Kingsbury, R. Palmer, of Schenectady; C. H. Wood, E. S. Northrup, A. L. True, E. A. Brainerd, H. W. Dun, H. W. Dun, Jr., E. S. Chase, W. P. R. Pember, of Albany; D. D. Cassidy, E. L. Andrews, of Amsterdam.

The story given to the M. I. T. alumni by I. W. Litchfield, the alumni field manager, was composite in its nature. To his audience of engineers, Mr. Litchfield outlined the growth of the educational structures from the driving of piles and placing of the foundations to the finishing of the stately dome. He also noted the progress in furnishing dormitories for the students, a project new at Tech, and then presented the plans of the Walker Memorial. This part of the story was illustrated by means of nearly one hundred lantern views showing stages of construction, plans, elevations, etc.—*Schenectady Gazette*, March 7.

ST. LOUIS SOCIETY OF THE M. I. T.—The largest crowd of the season turned out at the City Club on February 11 to greet our ubiquitous field manager, Mr. I. W. Litchfield, '85, with his splendid views of the new buildings and tantalizing hints of the Reunion doings. The combination of attractions makes us long for "the days that were free from care," when it was the landlady who did the wondering what we'd do when the room rent came "roun'." The secretary knows of two local joy seekers who have already spoken for bunks on the Technology ship, and when it is more generally noised abroad in South St. Louis what our mascot is to be, there will be plenty of volunteers to assist with it. The following men boarded the gospel wagon at the City Club at noon under Mauran's leadership, Thomas at the lantern and Litchfield with the megaphone: Carpenter, '73, Mauran, '88, Rosenheim, '93, Phemister, '95, Wadleigh, '97, Little, '98, Bronson, '01, Holcombe, '04, Caldwell, '06, Brown, '08, Cohen, '10, M. Desloge, '12, Downey, '13, O'Reilley, '13, Thomas, '13, Bowman, '14, Bristow, '14, Morrill, '14, and Wells, '15.

Just what occurred at the smoker at the Architectural Club's

house in the evening remains hidden fondly in the memories of those who were present. It was a joint meeting of the St. Louis Chapter of the American Institute of Architects and the local architectural club in honor of the election of our chairman, Mauran, '88, as president of the American Institute; and Litchfield had an appreciative audience for the stories he hung on the architects of Technology, both new and old. It was closing time when Bronson, Klipstein and Little persuaded him to leave the rest of the spaghetti and the table ware.—*A. M. Holcombe, '04, Secretary, 510 Pine Street, St. Louis, Mo.*

THE CINCINNATI M. I. T. CLUB.—The Cincinnati M. I. T. Club will have a dinner, followed by a bowling party in March, but the exact date has not been determined as yet. Everybody seems anxious to have one more fling with the cannon balls so as to be prepared, should there be necessity, to fling them for our country. The real truth, no doubt, is that the Mechlenburg feast, half liters, and Tech songs will be the drawing cards. After this final indoor meet, we will have our usual ball game, and to prove their great enthusiasm several members have gone to the southern training camp with the Cincinnati Reds. The squad included the pitchers and catchers, soon to be followed by the other members of the team, with the exception of Stanley Hooker, '97, who is busy rocking the new heir, Stanley Hooker, Jr., to sleep each night, thereby preventing his taking the trip. Our campaign for the June Reunion is being started, and we will be in Boston with a good bunch of men.—*Edward H. Kruckemeyer, '11, Secretary, 111 East Fourth Avenue, Cincinnati, O.*

DETROIT TECHNOLOGY ASSOCIATION.—The annual meeting of the Detroit Technology Association was held on Friday evening, January 21, at the Detroit Board of Commerce. We had as our guest of honor, Frederic H. Fay of the class of '93.

Later in the evening Mr. Fay addressed the members of the Detroit Engineering Society and their friends in the auditorium of the Board of Commerce, and our association attended this meeting in a body. Mr. Fay gave us a very enthusiastic description of the Reunion which is to be held at Boston next June, and we fully expect that Detroit, under the leadership of A. F. Shattuck, '91, who has been appointed our Reunion representative, will have a large showing at Boston next summer.

At this meeting definite announcements were made regarding monthly luncheons which are to be held the first Wednesday of each month at 12.30 p. m. at the Detroit Board of Commerce.

The officers elected for the ensuing year are as follows: President, G. R. Anthony, '98; vice-president, F. C. Sutter, '93; secretary-treasurer, D. V. Williamson, '10; chairman, luncheon committee, F. H. Davis, '04; chairman, finance committee, E. B. Cooper, '05.

The following members were present: William R. Kales, '92, George H. Kimball, '73, Granger Whitney, '87, George R. Cooke, '07, A. F. Shattuck, '91, F. H. Sutter, '93, O. W. Albee, '93, D. V. Williamson, '10, Allen Loomis, '99, Edgar Menderson, '13, A. L. Moses, '09, M. S. Dennett, '11, A. L. Matte, '09, Charles F. Hammond, '91, W. S. Richmond, '05, Dana H. N. Mayo, '14, S. Williams, '02, H. H. Ambler, '14, Currier Lang, '04, Frank H. Davis, '04, Edwin B. Snow, Jr., '05, R. F. Hill, '10, G. R. Anthony, '98, H. T. Winchester, '03, E. B. Cooper, '05, Waldso Turner, '05, George H. Ropes, '93.

On February 2 at the Detroit Board of Commerce at 12.30 p. m., the first regular luncheon of the Detroit Technology Association was held. Seventeen members were present, and had a very enjoyable and enthusiastic gathering.

Granger Whitney, '87, made a motion that a committee of one including Mr. Kales be appointed to take over the job of creating an appropriate mascot to represent Detroit at the festivities in Boston next June. This motion was unanimously carried, and Mr. Kales promised to report on the matter at the next regular luncheon, which will be held the first Wednesday in March. These luncheons, by the way, are scheduled to happen at 12.30 p. m. the first Wednesday in each month. Those present were: G. R. Anthony, '98, E. B. Cooper, '05, L. E. Williams, '02, H. L. Graber, '03, Granger Whitney, '87, F. C. Sutter, '93, F. H. Davis, '04, Wm. R. Kales, '92, A. F. Shattuck, '91, A. L. Fisher, '03, R. F. Hill, '10, W. S. Richmond, '05, D. V. Williamson, '10, H. H. Ambler, '14, H. G. Swift, Marvin Gorham, '93, E. B. Snow, Jr., '05.

On Wednesday, February 9, the first of a series of bowling nights was held at the University Club. At the first monthly luncheon preceding this event, such a plan was suggested and was

met with joyous approval by everyone present. Accordingly on the appointed date, fourteen fellows of assorted ages appeared in the University Club alleys.

After everyone had stalled around about being inexperienced at bowling, along came Dow with his privately trained three-fingered ball done up in a khaki Mother Hubbard to keep its high polish from being marred up in the slightest degree. Dow started in with 200 scores, but some of the other "dark horses" began to show the crowd that they had some of that too. A keg and sandwiches kept the bowlers from feeling the effects of their strenuous exertions. Everybody is looking forward to the next bowling night, when it is expected that double the number will turn out.

The following were present: Granger Whitney, '87, Wm. R. Kales, '92, Fred Sutter, '93, A. F. Shattuck, '91, H. G. Swift, A. L. Moses, '09, C. W. Dow, '11, G. R. Anthony, '98, R. F. Hill, '10, A. L. Fisher, '03, M. S. Dennett, H. T. Winchester, '03, E. B. Cooper.

On Wednesday, March 8, Technology men—18 strong—had possession of the bowling alleys of the University Club. Besides the sport itself, these evenings are proving an excellent way of getting everybody thoroughly acquainted with everybody else, and it is quite probable that they will be a regular monthly event. We had one guest with us that evening, Allen Gould, '10, of Cleveland.

Ten of the best bowlers have been selected to make up two five-men teams to represent this association in a match to be played off with the Cornell Alumni Association of this city, and a challenge has been issued to the Cornell aggregation, the match to be played some time during April.

The following men were present: Allen Gould, '10, Cleveland, Minot Dennett, '11, Thornton Winchester, '03, Jack Moses, '09, C. W. Dow, '11, George Anthony, '98, A. H. Miller, '15, Ring Cooper, '05, Wm. R. Kales, '92, J. H. O'Brien, '10, A. L. Fisher, '03, Roger Hill, '10, Don. Williamson, '10, O. W. Albee, '93, Fred Sutter, '93, H. H. Ambler, '14, Granger Whitney, '87, Currier Lang, '04.—*D. V. Williamson, '10, Secretary-Treasurer, Detroit Edison Company, Whitney Bldg., Detroit, Mich.*

TECHNOLOGY CLUB OF FALL RIVER.—The club had a meeting at the Golf Club on February 29, to meet Field Manager Litchfield, '85, of Boston and hear about the plans for the big Reunion in June. Although it was a cold night, there was a roaring fire at the club house and all was warmth and jollity within. After a most appetizing dinner Mr. Litchfield showed slides depicting Rogers Building as it was in the early 70's, and still other pictures taken about ten years later. Then followed a series of slides showing the new Technology buildings in Cambridge from the bare site up to the present time. These had a great deal of interest for those members who had not seen the buildings in process of erection. There were slides showing the elevation of the new dormitories, which are being built, and also the plans; there was an elevation of the Walker Memorial which will soon be begun, and also plans of the interior. The program of the Reunion had great interest for the members present and it developed that practically every man intended to take part in the various festivities.—*Earl R. Hamilton, '09, Secretary, Fall River Gas Works Co., Fall River, Mass.*

TECHNOLOGY CLUB OF NEW BEDFORD.—The New Bedford *Morning Mercury* said that when the author of the *Old Farmers' Almanac* gets in touch with the Technology Club of New Bedford and learns the date of its annual dinner, it is a cinch to predict a snowstorm with perfect accuracy. The memory of the members of the club runs back a few years to the time when Dr. Maclaurin came down in a blizzard and had to be shoveled out to the Country Club where he arrived at about 11.00 o'clock and then shoveled back again. Arrangements had been made to hold the annual dinner at the Country Club on February 3, but when on that morning a miniature snowstorm set in the turkeys were hurriedly sent for and the dinner scene was set at the Wamsutta Club. It was a rather boisterous day, but inside the club everything was bright and hospitable. In one of the anti-chambers a yard-arm had been improvised, and over this the sun was supposed to shine for about half an hour preceding the dinner. This was not only a pleasant innovation but showed to what extent preparedness, for which New Bedford is noted, has been carried.

The menu card was a fearful and wonderful creation. On the cover was a photograph of the mobilization at George Nye's clam

farm, and before you could order the food you had to guess the charades which masqueraded as a special examination in gastronomy. W. A. Robinson, Jr., '98, president of the club, acted as toastmaster, and introduced as the first speaker, Professor Edward F. Miller, '86, head of the Department of Mechanical Engineering at the Institute. Professor Miller gave a description of the equipment of the mechanical laboratories at the new Technology which opened the eyes of his audience. The plans he unfolded described the wonderful facilities which Course II will have for practically every phase of mechanical engineering. The speaker said that he had seen the equipment for taking engineering in this country and abroad, and there was nothing in the world as complete as the equipment of the new Technology.

Field Manager Litchfield, '85, who was then called upon, painted a picture of the great Technology Reunion in June, and told what was expected of the alumni, particularly of the Technology Club of New Bedford. It transpired that the New Bedford club is planning to show the students and graduates of the Institute that the whalers are equal to the occasion. Edgar B. Hammond, '73, and Allen T. Weeks, '08, both of whom have yachts, will put them at the disposal of the New Bedford Club and the members are planning to go through Cape Cod, up the coast and straight into the Technology basin in the Charles river, and show the Boston people that New Bedford is a whale of a city.—*Richard D. Chase, '92, 607 Purchase St., New Bedford, Mass.*

THE TECHNOLOGY CLUB OF THE MERRIMACK VALLEY.—The club held its annual meeting, followed by a dinner and speaking, at the Spalding House, Lowell, Wednesday evening, February 16. Forty-three were present, the largest number ever on hand for a similar affair. It was an uncommonly interesting meeting, although the speaking was wholly informal. Unfortunately I. W. Litchfield, '85, field manager of the Institute, was unable to be present to give his talk anent the forthcoming dedication of the new Tech group of buildings in Boston. In his place, however, Dr. H. W. Tyler, '84, head of the department of mathematics, was present and gave an interesting lecture on the buildings, illustrated by about one hundred lantern slides.

The annual meeting came early in the evening, the following officers being chosen for the year: President, Robert F. Pickels, '87,

of Lawrence; vice-president, Edgar H. Barker, '86, of Lowell; secretary, John A. Collins, Jr., '97, of Lawrence and treasurer, W. O. Hildreth, '87, of Boston. Philip R. French, '00, of Lawrence, was chosen a member of the Executive Committee, and R. A. Hale, '77, of Lawrence was elected representative to the Alumni Council.

The dinner was served by Mrs. Calder of the Spalding House, and it was an uncommonly good one. Although more attended than she had anticipated, there was enough and more and the serving was done in thoroughly good manner. At 8.30 o'clock the members of the association went to the larger rooms on the second story, where Dr. Tyler's lecture was given.

The story of the M. I. T. alumni was told by him, after which he gave the story of progress which has attended the erection of the new Technology group in Boston.

E. P. Brooks, '17, of the present undergraduate body, spoke briefly on student activities at the Institute. He is well known as an athlete, and his remarks were most interesting.

Those present during the evening were the following named: Dr. H. W. Tyler, '84, Charles H. Eames, '97, H. A. Hands, '16, C. F. Hobson, '11, S. J. Spitz, '14, A. H. Kaufman, '11, E. L. Woodward, '11, P. B. French, '00, Gen. G. W. Pearson, '89, F. T. Scannell, '04, P. L. Scannell, '14, J. E. W. Giffels, '14, Roland Woodward, Jr., '14, H. V. Hildreth, '85, George Bowers, '75, John C. Chase, '74, Bertrand F. Brann, '12, Herbert I. Ball, '06, Oliver Stevens, '10, R. A. Hale, '77, R. A. Wentworth, '04, E. H. Barker, '96, G. H. Perkins, '99, R. F. Pickels, '87, E. P. Brooks, '17, E. E. Blake, F. Hanchett, William F. Walkey, G. L. Reid, Charles J. McCarthy, John A. Collins, Jr., E. B. Carney, '93, S. G. Stephens, '83, C. G. Kimball, R. E. Manning, F. D. Lambert, Dr. John H. Lambert, '98, Edmund T. Simpson, '90, A. J. Lindsley, '02, C. R. Lord, '16, Knight B. Owen, '16, and Ralph A. Fletcher, '16.—*Courier-Citizen* (Lowell), February 17.

SOUTHEASTERN TECHNOLOGY ASSOCIATION.—On Saturday evening the Southeastern Association of the Massachusetts Institute of Technology held its annual dinner at the Tutwiler. The meeting was well attended, and many topics of interest to Technology men were discussed. There were several visiting alumni, among

whom was T. W. Sprague, '87, of Boston, who gave a short talk on the new Technology that is nearing completion.

The principal item of interest discussed was the coming convention in June for the dedication of the new buildings. Plans were laid for the sending of a large Alabama delegation to this Reunion. The plan is to assemble all southern Technology men at some convenient point, possibly Chattanooga, and go on to Boston *en masse*.

New officers were elected: Paul E. Chalifoux, '02, president, and F. C. Weiss, '13, secretary. The association will hold monthly luncheons at the Hillman on the first Wednesday of each month, time 1 p. m.

The regular members present included: Anson W. Allen, Harvey G. Woodward, Edward P. Quigley, Paul E. Chalifoux, Samuel A. Fletcher, Walter E. Hadley, William H. Beers, J. R. O'Hara, Jr., Arthur F. Mohan, Clifford H. Boylston, Peifer Smith, Julian E. Adler, and Fernard C. Weiss; visitors, T. W. Sprague, '87, of Boston, and G. L. Paullis, '12, of Chicago.—*Birmingham Age Herald*.

STATE OF MAINE.—With a membership of nineteen men, the Technology Association of Maine, composed of Maine alumni of the Massachusetts Institute of Technology, was organized at Portland, Monday evening. Isaac Litchfield '85, of Boston, the author of many such organizations, appeared especially before the local men and gave an interesting talk on the progress of the new Institute buildings which are being completed at a cost of \$6,500,000, and upon the Reunion of the alumni which will be held in Boston next June.

At the conclusion of Mr. Litchfield's remarks, a rousing Tech cheer was given, and temporary officers of the association were elected as follows: Chairman, R. H. W. Lord, '05, and secretary, William F. Smart, '05. For the purpose of interesting Tech graduates in this new organization, it was voted to hold a general get-together of Tech men some time in May. A committee was appointed for arranging this matter and the exact time and place were left to them to decide.

Those present were: Walter H. Norris, '93; Dr. James S. Wadsworth, '93; R. F. Bennett, '99; Edward M. Hunt, '94; W. H. Lane, '93; William N. Todd, '94; L. A. Crowell, '98; Joseph A. Warren, '91; E. Sutermeister, '99; R. P. Joslyn, '15; M. H. Dole, '09; K. E.

Terry, Jr., '06; William F. Smart, '05; A. H. Morrill, '92; E. E. Pettee, '92; E. Leander Higgins, '05; R. H. W. Lord, '05; Alfred E. B. Hall, '15; George E. Wallis, '09, and Isaac Litchfield, '85.

M. I. T. CLUB OF CENTRAL NEW YORK.—On Saturday evening, February 5, the M. I. T. Club of Central New York had the pleasure of a visit from Professor H. W. Tyler, '84, of the Department of Mathematics. The following men were present at the dinner: John S. Barnes, '08, Edwin W. Bonta, '07, F. J. Chesterman, '05, William W. Cronin, '04, W. E. Hopton, '91, H. W. Jordan, '91, Howard H. McChesney, '07, Irving S. Merrell, '96, D. D. Mohler, '03, James R. Vedder, '07. Lantern slides showing pictures of the new buildings, Walker Memorial and gymnasium, were shown and described by the speaker. He emphasized the importance of the Alumni Council and the importance of a large attendance at the Grand Dedication Reunion in June.—*James R. Vedder, '07, Secretary, 704 Sedgwick, Andrews & Kennedy Building, Syracuse, N. Y.*

TECHNOLOGY CLUB OF BUFFALO.—The Technology Club of Buffalo held its annual dinner at the University Club, Buffalo, February 3, which was attended by about forty alumni. Among those present were: H. M. Cushing, '99, N. Loring Danforth, '01, Edward G. Henrich, '99, Carl A. Houck, '05, Wm. G. Houck, '93, Frank G. Lane, '02, R. W. Lindsay, '07, Paul F. Mann, '06, H. P. Parrock, '01, Nathaniel K. B. Patch, '01, E. Earle Root, '11, W. H. Watkins, '95, Howard E. Batsford, '08, William M. Corse, '99, Norman Duffett, '11, W. N. Flanders, '13, M. C. Hayes, '08, A. T. Hinckley, '08, Otis Hutchins, '11, Chas. G. Maier, '14, H. L. Noyes, '90.

The principal speaker was Professor Harry W. Tyler, '84, head of the Department of Mathematics at the Institute. Professor Tyler brought with him a number of slides showing pictures of the old buildings, also progressive pictures of the new Technology from the bare site up to the present time. He told about the dormitories which are now being built, also the Walker Memorial which has been planned by an alumni committee of which he is chairman.—*E. Earle Root, '11, Secretary, Buffalo Standard Ink Corporation, Buffalo, N. Y.*

THE TECHNOLOGY CLUB OF PUGET SOUND.—The Technology Club of Puget Sound has been holding luncheons regularly and will continue to do so until the summer months begin.

We are planning to send a mascot to the Reunion which will be suggestive of our Puget Sound country. There is so much uncertainty regarding the men who are going that we shall not designate any delegate until later on, but we are surely going to have a mascot,—so look out for the Puget Sound Siwash.

Nineteen Tech men with hearts aglow and voices aflame helped to raise the roof at the University of Washington gymnasium on March 20 in honor of the inauguration of Dr. Henry Suzzallo as president of the university. Twelve hundred college men took part in the festivities that evening and listened to the various addresses and toasts and helped in the cheering and singing of the songs of the various colleges.

Marching behind the banner of Technology and standing shoulder to shoulder with the Harvard delegation the "allies" rushed the cohorts of Yale, in a friendly spirit, to be sure, but nevertheless they rushed the Yale contingent!

Think of that! A few years ago it was Tech and Yale against Harvard and now it is Tech and Harvard against Yale and all the rest of the push. I should not be surprised to see the Technology society unite with Harvard for a dinner and then the union would be completed.—*Joseph Daniels, '05, Secretary-Treasurer, 5511 University Boulevard, Seattle, Wash.*

WASHINGTON SOCIETY OF THE M. I. T.—An enthusiastic meeting of the Washington society was held in the hall of the Tea Cup Inn on March 29. An informal dinner was served for forty-five covers, after which O. C. Merrill, '05, chief engineer U. S. Forest Service, gave a talk on water power developments in the West, profusely illustrated with colored slides, winding up with a moving picture of a forest fire, showing very vividly the widespread destruction that a careless hunter can cause with a lighted match. This being ladies' night, dancing was enjoyed for some time after the talk.

One of the novel features the Washington society boasts of is its orchestra composed of Sutton, '08, piano; Swanton, '90, first violin, leader; Bailey, '05, second violin; Starr, '05, clarinet; Phelps, '99, cello; and Dean, '00, flute.

Many interesting slides of the new Tech buildings were also shown. On canvassing the meeting it developed that probably more than twenty of those present are planning to attend the big Reunion in Boston next June.

The following were present: Mr. and Mrs. E. B. Phelps; Mr. and Mrs. W. C. Dean; Mr. and Mrs. J. W. Clary; Mr. and Mrs. M. V. Ayres; Mr. and Mrs. W. H. Keen; Mr. and Mrs. F. W. Ranno; Mr. and Mrs. R. B. Sosman; Mr. and Mrs. W. E. Parker; Mr. and Mrs. B. L. Johnson; Mr. and Mrs. Sutton; Mr. and Mrs. H. S. Bailey; Mr. and Mrs. A. F. Stevenson; Mr. and Mrs. F. A. Hunnewell; Mrs. F. H. Proctor; Mrs. M. A. Starr; Miss Mildred Weeks; Miss Marion Weeks; L. H. Allen; F. T. Schneider; P. D. Dodge; H. G. Manning; G. W. Stose; F. F. Schaller; F. E. Fowle; M. V. Richards; O. C. Merrill; H. C. Morris; F. C. Starr; F. W. Swanton; W. F. Wells.—*F. C. Starr, '05, Secretary, Wilkins Bldg., Washington, D. C.*

Tech at the Architectural League Exhibit

In a report of the exhibition of the Architectural League of New York in the *New York World* of February 6, four Technology men are mentioned in one paragraph, which is as follows:

"There was a press view Friday at the Fine Arts Building at the Architectural League's annual exhibition. The outstanding feature of the show, to which we will return for comment in detail on another occasion, is the transformation of the big Vanderbilt gallery into a formal Italian garden, with hedges the size of life, pools, paths and sculpture galore. The latter includes a sun dial by Robert Aitken, Augustus Lukeman's Straus Memorial, Edward F. Stanford's groups for the Core mausoleum at Norfolk, Daniel C. French's ('71) "Spirit of Life" for the Trask memorial, and divers other monumental productions. In this room also there are important architectural exhibits, among them Mr. Goodhue's Grace Church for Chicago, Guy Lowell's ('94) Boston Museum and Mr. Bosworth's ('89) Massachusetts Institute of Technology. Elsewhere there are further illustrations of the art of building, but sculpture and mural decoration are much in evidence. The league's gold medal has been awarded to Cass Gilbert ('80) for the Woolworth Building."

REPORT OF THE SECRETARY-TREASURER

The year's alumni record presented at the January meeting of the Alumni Council—Financial report and reports of special committees

MEMBERSHIP:

The membership of the Alumni Association on December 31, 1915, was 7,110 of whom 5,621 were members by graduation and 1,489 by election. Of these 348 are life members. There are five honorary members.

Dues were received during 1915 from 3,682 members, or about 52 per cent. of the total membership. This is a somewhat lower percentage than for several years. During the last six months of the year the number of payments of dues exceeded the payment of dues in the corresponding months of the previous year.

The standing committee in charge of collection of dues and increase in membership believes that the loss in the number of payments is accounted for by the business depression of the early part of the year.

ATTENDANCE:

The attendance at the Council meetings has been larger than last year or any previous year. The record meeting of the year was held on November 29, when we had sixty members and six guests present. There have been held during the year eight regular meetings, with average attendance of 52.

The Executive Committee of the Council has held twelve meetings during the past year.

POLICIES:

The policy of having guests at the Council meetings, from the Faculty and Corporation, has been continued during the past year. At the meetings we have had an average of eight guests per night. This number was increased by the large number of guests on Undergraduate Night, May 24.

It has been the policy of this administration to review the work of the Council and if possible to clear the docket of important problems. It has, therefore, devoted a large part of its time to

the consideration of the problems of dormitories and Walker Memorial.

It has included as a part of its program for the year a series of talks by those who have been connected with important Institute problems for the benefit of members of the Council and has devoted parts of four meetings to these special problems. One meeting was devoted to activities of the undergraduates and comprehensive reports were made by the representative undergraduates of their activities.

Mr. Underwood gave a talk on the Beaver and why it has been appropriately chosen the mascot of Technology.

The story of the purchase of the new site for the Institute was told at another meeting by Mr. Everett Morss, '85, and at still another meeting the story of the State Aid campaign was told by Mr. J. W. Rollins, '78.

The administration feels that, while a large number of subjects during the past year have not been discussed, the work of the Council has been of material aid to the Institute.

Two committees during the past year have had a conspicuous part in the proceedings of the Council meetings: The Munroe Committee on Dormitories and the Walker Memorial Committee.

The Committee on Dormitories made a report of progress in March and continued its work until the fall when, on account of the special contributions given to the Institute for dormitories, the committee asked to be and was discharged by the Council. After the discharge of this committee, a committee was appointed, at the suggestion of Mr. Bemis, to consider the problem of dormitory government. This committee has made a report of progress but not a final report.

The other committee, which has taken an active part in the work of the Council for the year, is the Walker Memorial Committee. The major part of the March meeting was devoted to the discussion of the Walker Memorial problem. Part of the April meeting was also given to this problem and also part of the December meeting.

One very important committee has been authorized and appointed during the past year; namely, the committee to take charge of the All-Technology or Dedication Reunion of 1916. This committee has already begun this work.

EVENTS:

During the past year the particular events of interest have been the annual banquet which was held at Hotel Somerset in January; the convention of the Technology Clubs Associated in Pittsburgh in February, and the annual Commencement Day celebration and Pop Concert in June.

One of the important items of interest of the year has been the activity of our field manager and his visits to the local associations. Members of the association will listen with interest to the report of the field manager.

FINANCES:

It is some time since the treasurer of the association has been able to announce to the Council that the association is clear from debt. Only four times in the past ten years has there been a surplus at the end of the year, and this is the first time in the past seven years. This past year, in spite of the falling off of dues, the association has not only been able to pay the expenses of the year but has wiped out the debt which had been bequeathed to it, not by the last administration but by a number of past years. By the balance sheet and final report of the treasurer, it may be seen that at the end of the fiscal year the association had a balance of \$184.24. Appended is a financial statement which has been approved by the auditors and expert accountant.

WALTER HUMPHREYS,
Secretary-Treasurer.

STATEMENT

December 31, 1915

<i>Resources</i>		<i>Liabilities</i>	
Cash,	\$777.79	Accounts payable,	\$850.77
Accounts receivable,	660.89	Life membership,	50.00
Furniture and fixtures,	377.57	Class of 1910,	289.49
Inventory,	262.09	Banquet 1916,	20.84
		Dues and subscriptions in	
	<hr/>	advance,	683.00
	\$2,078.34		
Liabilities,	1,894.10		<hr/>
			\$1,894.10
Surplus,	\$184.24		

Report of the Secretary-Treasurer

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<i>Expense 1915</i>		<i>Income 1915</i>	
Secretary's salary,	\$500.00	Sustaining membership,	\$1,408.00
Labor,	2,090.61	Dues,	3,680.50
Postage and printing,	1,085.11	Back dues,	134.00
Stationery and supplies,	242.47	Interest and discount,	72.43
Council,	144.15	Gifts,	14.00
Collection expense	17.96	Profit and loss,	948.90
Telephone and telegraph,		"Pops,"	93.94
carfare, etc.,	57.07	REVIEW subscriptions,	3,273.00
Miscellaneous expense,	156.42	REVIEW advertising,	2,628.72
Field manager,	327.12	REVIEW sales and special	
10 per cent. on furniture and		subscriptions,	89.46
fixtures,	41.95		
Profit and loss,	18.00		
Editor's salary,	1,000.00		
REVIEW labor,	655.27		
REVIEW paper,	1,600.00		
REVIEW postage,	464.78		
REVIEW printing, etc.,	2,949.12		
REVIEW supplies and tele-			
phone,	44.53		
REVIEW advertising,	110.71		
	<hr/>		
	\$11,505.76		
Deficit January 1, 1915	652.95		
	<hr/>		
	\$12,158.71		
Surplus,	184.24		
	<hr/>		
	\$12,342.95		
			<hr/>
			\$12,342.95

COMMITTEE ON PERMANENT FUNDS

The Committee on Permanent Funds reports that during the past year the committee has reorganized along the lines suggested by votes of the Executive Committee of your Council. Professor Richards was elected chairman and the secretary-treasurer was elected treasurer and acted as secretary.

The securities held by the Committee on Permanent Funds have been deposited in the Trust Department of the Old Colony Trust Company in accordance with the vote of the Executive Committee and similar to the plan followed by the Institute itself.

Eighteen students have received loans during the past year, and the awards have amounted to \$1,250.

The committee has followed the recommendation of last year's committee and has applied one tenth of the gross income of the Rogers Fund to the capital account of this fund.

During the past year a new form of note has been adopted, which is interest-bearing from the beginning. Previously awards have been made to students on the basis of a note bearing interest at 6 per cent. after three years from date. Now 2 per cent. is charged from the date of the note and 6 per cent. after three years. It is believed, by the committee, that the habit of making semi-annual payments will keep the borrower in touch with the Institute and make him appreciate to a greater extent his responsibility to the committee.

The committee has funds available so that during the coming year students can be helped even more generously than during the past year.

The statement of the funds, as appended herewith, has been audited by the accountant employed by the auditors appointed in accordance with the constitution of the association.

FINANCIAL REPORT

<i>Assets</i>		<i>Liabilities</i>	
Cash,	\$2,627.44	Rogers capital,	\$10,100.00
Stocks and bonds,	18,595.00	Rogers Loan account,	8,987.94
Rogers loans,	6,485.00	Life Membership Fund,	8,032.94
Income in suspense,	375.00	Alumni Fund,	961.56
	\$28,082.44		\$28,082.44

Schedule of Securities

Amt.	Description	Due	Balance Jan. 1, 1915	Sales 1915	Balance Jan. 1, 1916	Interest
\$2,000.00	Bay State St. Ry. Co. 5%,	1927	\$1,980.00		\$1,980.00	\$100.00
1,000.00	Boston Elevated 5%,	1942	1,000.00		1,000.00	50.00
2,000.00	Detroit Edison 5%,	1933	2,015.00		2,015.00	100.00
7,500.00	Kansas City M. & B. 5%,	1934	6,650.00		6,650.00	
5,000.00	Georgia Ry. & Elec. 5%,	1949	4,900.00		4,900.00	250.00
1,300.00	Technology Club, 2nd Mtge. 4%,	1911	1,300.00	\$1,300.00		52.00
2,000.00	United States Steel, 5%,	1963	2,050.00		2,050.00	100.00
\$20,800.00			\$19,895.00	\$1,300.00	\$18,595.00	\$652.00

REPORT OF ALUMNI FUND COMMITTEE TO DECEMBER 31, 1915

SUBSCRIPTIONS:

The total subscriptions to date amount to \$500,680 and the number of subscribers is 2,619.

PAYMENTS:

The actual payments on account of the above subscriptions are \$348,830.43, of which \$66,711.15 has been paid since October 1, 1915.

Of the amount actually received \$20,000 was subscribed specifically to help pay for the land of the new site, so that the amount of subscriptions on hand now amounts to \$348,830.43.

INCOME:

Interest and other income has amounted to \$17,336.41, which added to subscriptions now on hand make total assets of the fund \$366,166.84.

ASSETS:

The total assets of \$366,166.84 are in the hands of the treasurer of the Massachusetts Institute of Technology, as the Alumni Fund Account, no appropriations from this fund having as yet been made by the Corporations.

No active campaign for subscriptions has been carried on by the committee during 1915, but it is expected that a new campaign for funds will be started within the next few weeks.

EVERETT MORSS, *Chairman,*
Alumni Fund Committee.

STATEMENT M. I. T. ALUMNI FUND TO DECEMBER 31, 1915

Payments on subscriptions to October 1, 1915 (previous report), less \$20,000 paid M. I. T. account new site	\$282,119.28
Additional to December 31, 1915	66,711.15
Total payments on subscriptions	\$348,830.43
Net income to October 1, 1915 (previous report)	\$15,481.12
Additional to December 31, 1915	1,855.29
Total income	17,336.41
Total Fund	\$366,166.84

Assets

Cash in First National Bank—Open account (2%)	\$199,662. 01	
Cash in First National Bank—Time Department (3%)	91,504. 83	
		<hr/>
	\$291,166. 84	
Loan—Participation—First National Bank 3%	75,000. 00	
		<hr/>
		\$366,166. 84

REPORT OF THE WALKER MEMORIAL COMMITTEE FOR 1915

The year has been one of renewed activity, though actual progress has not been quite so rapid as was desired by the committee, and in fact by all concerned with the problem.

Early in the year plans prepared by the Institute architect were thoroughly studied by the committee and brought in the end to what seemed a satisfactory basis for financial estimates. These plans were reproduced in the TECHNOLOGY REVIEW for May and June, 1915. In certain respects they were found disappointing, since the committee had not deemed it feasible, with the funds supposed to be available, to include in the Walker Memorial either the general gymnasium, originally contemplated, or the general dining hall. This latter, while not an essential feature, would naturally be so related to the Walker Memorial that close proximity at any rate would be advantageous to both.

At a recent meeting of the committee the architect presented a revised program for a larger building, including a general dining hall, with a general gymnasium above, and at the same time retaining all the essential features of the earlier plans. The committee expressed its approval of the general scheme and now awaits its further development with the hope that the necessary funds for carrying out a really adequate and complete program for student welfare and activities may be secured, so far as it is not already available, through the operations of the Alumni Fund Committee.

The financial condition of the Walker Memorial is shown by the following statement:

Report of the Secretary-Treasurer

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REPORT OF THE WALKER MEMORIAL FUND JANUARY 1, 1916

Subscriptions received by treasurer of Alumni Committee,	\$83,351.34
Interest,	1,403.73
Subscriptions received by treasurer of the Institute,	11,863.34
Interest on Fund after investment to January 1, 1916,	63,165.41
	<hr/>
	\$159,783.82

Expenses

Bills paid by treasurer of the Alumni Committee,	\$2,712.05
Bills paid by treasurer of the Institute,	1,332.10
	<hr/>
Total bills paid,	4,044.15
Less appropriation of association,	600.00
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	\$3,444.15
Balance in hands of Alumni Committee,	2,593.02
Balance in hands of treasurer of Institute,	153,746.65
	<hr/>
	\$159,783.82

There are also unpaid subscriptions amounting to somewhat more than \$20,000, subject presumably to some reduction in view of the lapse of time.

For the Committee,

H. W. TYLER, *Chairman.*

REPORT OF THE FIELD MANAGER

As field manager of the Alumni Association I have to report that the association was represented at 42 centers of Tech alumni by Boston men. Following is a list of the places where meetings were held and the men who represented the Council:

Atlanta	Merton L. Emerson, '04	April 7, 1915
Birmingham	Merton L. Emerson, '04	April 9
Bridgeport	I. W. Litchfield, '85	January 30
Buffalo	Henry J. Horn, '88	February 23
	I. W. Litchfield, '85	June 1
Butte	Charles T. Main, '76	June 18
	Charles E. Locke, '96	July 17
Charleston	Prof. R. H. Richards, '68	April 19
Chicago	Prof. C. M. Spofford, '93	May 12
	Henry J. Horn, '88	November 2
Cincinnati	I. W. Litchfield, '85	February 22
	Prof. C. R. Richards, '85	February 22
	I. W. Litchfield, '85	November 23

Cleveland	Dr. R. C. Maclaurin	February 23
	I. W. Litchfield, '85,	February 24
Connecticut Valley Association	I. W. Litchfield, '85	June 26
	Dr. J. Arnold Rockwell, '96	June 26
Dallas	Merton L. Emerson, '04	April 13
Dayton	I. W. Litchfield, '85	February 22
Denver	Prof. C. E. Locke, '96	June 30
Detroit	I. W. Litchfield, '85	February 23
	Prof. A. H. Gill, '84	March 19
	Dr. R. C. Maclaurin	April 17
Fall River	I. W. Litchfield, '85	April 21
Hartford	George H. Gleason, '03	
Hawaii	Prof. Geo. H. Barton, '80	July
Indianapolis	Dr. R. C. Maclaurin	February 22
	A. Farwell Bemis, '93	March 30
	I. W. Litchfield, '85	November 20
Los Angeles	Merton L. Emerson, '04	April 23
	Prof. C. E. Locke, '96	August 19
	John C. Chase, '74	August 19
	Prof. R. H. Richards, '68	September 27
Louisville	I. W. Litchfield, '85	November 22
Manchester	Andrew Fisher, '05	March 19
	I. W. Litchfield, '85	March 19
	Henry J. Horn, '88	July 10
	I. W. Litchfield, '85	July 10
Milwaukee	Henry A. Morss, '93	
New Bedford	Dr. R. C. Maclaurin	January 29
	I. W. Litchfield, '85	April 20
New Orleans	Merton L. Emerson, '04	April 10
New York	Dr. R. C. Maclaurin	January 16
	Jasper Whiting, '89	January 16
	I. W. Litchfield, '85,	January 30
	Henry J. Horn, '88	January 30
	I. W. Litchfield, '85	November 23
	Dr. R. C. Maclaurin	December 11
	Prof. W. H. Walker	
	Prof. H. P. Talbot, '85	
	Arthur D. Little, '85	
Philadelphia	I. W. Litchfield, '85	February 8
	L. C. Wason, '91	April 22
	I. W. Litchfield, '85	November 24
Pittsburgh	I. W. Litchfield, '85	Feb. 19-20 (T. C. A.)
	Prof. R. H. Richards, '68	Feb. 19-20
	Dr. R. C. Maclaurin	Feb. 19-20
	Henry J. Horn, '88	Feb. 19-20
	James W. Rollins '78	Feb. 19-20
	Prof. W. H. Lawrence, '91	July 31

Pittsburgh	Prof. C. M. Spofford, '93	November 9
	I. W. Litchfield, '85	November 19
Pittsfield	Prof. R. C. Richards, '68	November 1
Portland	Merton L. Emerson, '04	May 3
	Prof. Geo. F. Swain, '77	August
	Prof. Davis R. Dewey	August
Providence	L. C. Wason, '91	February 17
	Dean A. E. Burton	May 4
Richmond	Prof. R. H. Richards, '68	April 24
Rochester	I. W. Litchfield, '85	June 2
	R. H. Howes, '03	June 2
St. Louis	A. Farwell Bemis, '93	March 26
	Prof. C. M. Spofford, '93	August 24
San Antonio	Merton L. Emerson, '04	April 15
San Francisco	Prof. H. W. Tyler, '84	July 10
	A. Laurence Brown, '13	July 10
	Prof. C. E. Locke, '96	August 10
	Prof. Davis R. Dewey	August 10
Salt Lake City	Prof. Chas. E. Locke, '96	July 9
Seattle	M. L. Emerson, '04	May 7
	Prof. C. E. Locke, '96	July 23
	Prof. H. W. Tyler, '84	August 3
Springfield	Eben S. Stevens, '68	April 6
	I. W. Litchfield, '85	April 6
	Prof. S. C. Prescott, '94	April 6
	Charles C. Peirce, '86	April 6
	I. W. Litchfield, '85	December 14
	Dr. R. C. Maclaurin	December 14
Syracuse	I. W. Litchfield, '85	June 3
Urbana	Prof. C. E. Locke, '96	June 21
Washington, D. C.	I. W. Litchfield, '85	February 8
Wilmington	Prof. R. H. Richards, '68	April 22

The following new clubs were formed in 1915:

Technology Club of Springfield, April 6, 1915.

Technology Club of Fall River, April 21, 1915.

Technology Club of Chile, August, 1915.

Technology Club of Louisville, November 22, 1915.

In all parts of the country the spirit is excellent and the efficiency of the clubs is decidedly improving.

I. W. LITCHFIELD,
Field Manager.

MISCELLANEOUS CLIPPINGS

To be able to express oneself correctly and tersely on paper is an asset second only to possession of the knowledge which it is desired to impart.

Writing Technical Reports

This applies especially to the engineer, whether of the operating, consulting or managing varieties; for there are times when an intelligible report on the performance of a plant, the results of a test or the adaptability of a manufacturing process will go far toward establishing a reputation.

According to an item in the *Electric Railway Journal*, the Massachusetts Institute of Technology has recently added to its curriculum a course in "Report Writing." This commendable step should be followed by other technical schools and should be made mandatory, not elective.

The student before entering college is presumed to have had a thorough grounding in English, but a perusal of the average student's laboratory report leads to the suspicion that the preparatory schools are paying too much attention to so-called fads and irrelevant subjects to the neglect of the three "R's." Some technical schools, recognizing this defect in the preparatory training, provide a course in English to supplement the technical course. This is undoubtedly beneficial where the time permits, but what the engineering student needs is not so much the acquirement of a literary style as the ability to record concisely what he observes. A course in report writing should meet this requirement.—*Tower*, New York.

A word about academy-making, by one of the founders of the organization from which sprang the society which in turn gave birth to our

Academy Making

American Academy of Arts and Letters, may be of interest in connection with the recent annual meeting of that body and its bestowal of a gold medal on its absent president, Mr. W. D. Howells. Mr. Frank B. Sanborn writes in his weekly Boston literary letter to the *Springfield Republican*: "Another society, bearing the name of the American Institute of Arts and Letters, met here on Thursday. . . . This institute was formed by the Social Science mother organization in 1898." Correcting some erroneous impressions prevalent in regard to this association, he continues: "Dr. Charles W. Eliot was never the president of the Social Scientists, who had for presidents, in succession, President Rogers of the 'Tech' [Mass. Institute of Technology], George William Curtis, President Angell of Michigan, President Gilman of Johns Hopkins, President White of Cornell, Dean Wayland of Yale, Oscar S. Straus, F. J. Kingsbury, and others. It was a nephew of Mr. Kingsbury, Dr. Holbrook Curtis of New York, who suggested the

formation of this Institute, to be made up partly from existing members of the parent body and partly from artists and authors outside, and for several years the starred list of Institute members was printed in the annual *Journal of Social Science*, which I edited for some thirty years. Out of these original Institute brethren was developed a smaller body, an American Academy, which seeks to hold a rank like that of the French Academy, and has advanced measurably in that direction." In conclusion the somewhat melancholy fact is noted that "meanwhile the mother society of social science has gone into cold storage, and no longer holds meetings, having long outlived its parent, the British Social Science Association, formed by Lord Brougham and his friend, G. W. Hastings, before our Civil War."—*Dial*, Chicago.

The academically famous "Van Am" song of Columbia University is proving to be but another instance that there is nothing new under the musical sun of American colleges.

College Songs A certain correspondent of the *New York Times* called attention to this song as being "unique in the history of college verse," in view of the fact that it grew up about a single personality and the traditions and feeling connected with that personality.

As might easily have been predicted, one now arises, in the person of another correspondent of the *Times*, who points out that, musically, as well as from the literary standpoint, the Columbia song "Do Ye Ken Van Am?" is but an echo of the old English hunting song, "Do Ye Ken John Peel?"

So it is ever with American college songs. "Fair Harvard" is "Believe Me, if All Those Endearing Young Charms"; Cornell's "Far Above Cayuga's Waters" is "Annie Lisle," and so on.

The *Times* correspondent wonders why American "seats of learning" have not given the country something of their own in the way of college songs. The answer probably lies in the fact that we have in America little traditional folksong already implanted in the general mind and heart upon which to draw. And college men themselves are too immature to create melodies rich as the old wine of folksong.

It is a little surprising that none of Stephen Foster's melodies have been levied upon in this respect. And if our exuberant college youth were sufficiently familiar with certain forceful and swinging melodies of the American Indian, and were not too deeply enslaved by custom and tradition, they might well look in that direction for something bold, new and fitting.

We are not, however, to overlook Frederick E. Bullard's famous "Stein Song," the music of which, strange to say, emanated, not from a classical seat of learning, but from the Massachusetts Institute of Technology.—*Musical America*.

The Smithsonian Institution has just issued an illustrated pamphlet containing a series of technical reports on experiments recently conducted

Aerial Experiments

in the wind tunnel for aërodynamics at the Massachusetts Institute of Technology at Boston, Mass.

In writing on this wind tunnel itself, J. C. Hunsaker, assistant naval constructor, U. S. N., and instructor of aëronautics at the Institute, says that since it is difficult to carry on full scale experiments to investigate the aërodynamical characteristics of a proposed air-craft design, tests are made on small models, as in naval architecture. The experiments are further simplified by holding the models stationary in an artificial current of air with a maximum wind speed from 34 to 40 miles an hour, instead of towing them at high speeds through still air to simulate actual flying conditions.

After a study of the principal aërodynamical laboratories of Europe, it was decided to reproduce at Boston a four-foot diameter wind tunnel of the National Physical Laboratory of Teddington, England, together with the aërodynamical balance and instruments used there for measuring velocity. In this connection the director of the English laboratory generously presented the detailed plans of the complete installation to the Massachusetts Institute of Technology. Mr. Hunsaker describes the wind tunnel, the aërodynamical balance, and explains some of the experiments and principles involved.

The second article of the series comprises notes on the dimensional theory of wind tunnel experiments by Edgar Buckingham of the United States Bureau of Standards, who defines the theories and principles involved, and suggests standardization of the methods employed.

In another report Mr. Hunsaker discusses the most common and convenient form of pressure anemometer, known as the Pitot tube, an instrument used in calculating the wind velocity from the pressure differences. He also describes the construction of an inclined manometer, a form of pressure gauge, used in the experiments.

Messrs. H. E. Rossell and D. W. Douglas report on their experiments concerning the adjustment of the velocity gradient across a section of the tunnel. Since in wind tunnel experiments it is essential that the velocity of the air striking different parts of the model under test, shall be the same, it was necessary after developing precise methods for measuring the velocity, to explore the cross-section of the tunnel to detect variations in velocity from point to point. The results of their experiments and the effects secured by the adjustment of a honeycomb grating, which straightened out the flow of air, are recorded.

Tests of the characteristic curves for wing sections are discussed by Messrs. H. E. Rossell, C. L. Brand and D. W. Douglas. They experimented with and tested the aërodynamical constants published by the British Advisory Committee for Aëronautics for wing profile R. A. F. 6,

and found the results to be sufficiently precise for purposes of aeroplane design.

J. C. Hunsaker discusses stability of steering of a dirigible, citing some of his experimental tests with a wooden model of a dirigible hull fitted with rudders and fins in accordance with regular practice. It is now possible to base the design of fin and rudder area upon his data instead of "rule of thumb." His experiments proved that with the size rudder and fin fitted (7.79 and 3.47 square inches), the ship could be held on its course by the use of not more than $16\frac{1}{2}$ degrees of rudder. The importance of a vertical rudder was proved, but it was found impossible in practice to give sufficient vertical fin area to hold the ship on its course without the use of the helm.

The pitching and yawning moments on a model of a Curtiss aeroplane chassis and fuselage, complete with tail and rudder, but without wings, struts, or propeller, are set forth in an article by Messrs. Hunsaker and Douglas.

Swept back wings are discussed by Messrs. Rossell and Brand, who maintain that with a sweep of 10 degrees an appreciable righting moment may be expected without change in any of the other aerodynamical properties of the straight wing.—*Gazette Times*, Pittsburgh, Pa.

The annual report of the President of the Massachusetts Institute of Technology, given out yesterday, indicates anew the remarkable progress which that institution has been making in recent years. **Technology** What is described as "a noble addition to the educational **Plans** buildings of the world" is likely to be practically completed when the dedication exercises are held next June. Dr. Maclaurin says that when he came to the Institute six years ago "a site of twenty-five acres was a dream of the future," yet now Technology has paid for and occupied "a site of double that area, which is generally recognized to be well suited to its needs." From across the Charles basin the buildings now present an impressive picture. During these transition years the numbers of students have increased steadily; Tech now has almost 2,000 students and would have more were not the war interfering with the plans of men in the belligerent countries. And the most striking feature of the report is this, that "the new buildings are none too large, and that in several important departments the Institute will soon have to face the problem of further building or limitation of numbers."—*Boston Herald*, Dec. 23.

Until recently progress in the development of flying machines and dirigibles has been based largely upon rule-of-thumb methods, costly in life and money, and showing, in many cases, little engineering appreciation of the complex problems involved. It is not surprising that an art so new as aviation should have depended so much upon empirical methods, but even before the outbreak of the European war, in which the service of the aëroplane has been literally invaluable for scout duty, steps had been taken, both in this country and abroad, to establish aëronautics upon an engineering basis. Pioneer work of great value has been accomplished by the National Physical Laboratory in England during the last few years under the general direction of Dr. R. T. Glazebrook; research has been vigorously prosecuted at the laboratory of the University of Göttingen, in Germany; and the industrial testing of air-craft, corresponding to the work of the ship model tank in naval architecture, attained an advanced status at the Eiffel and St. Cyr laboratories in France prior to the opening of hostilities.

In the United States the Massachusetts Institute of Technology opened in 1914 the first course in aëronautical engineering to be offered on this side of the ocean, and as the second year of the Institute's work in this specialized realm began last fall, attention may properly be called to the purposes and methods of those responsible for this important branch of educational and research activity. Without depreciating the contributions of American scientists and aëroplane builders to the art of aviation, President Maclaurin emphasized some time ago the need of freeing air-craft from its more serious dangers, establishing aëroplane and dirigible design upon a scientific basis, and preparing to supply specially trained engineers to meet future demands for economical and safer construction in both military and civil flying equipment. Based on the broad relationships of the naval architect, the mechanical engineer, the physicist and the meteorologist, the course was planned for a very limited number of graduate students qualified by the Institute's bachelor degree in mechanical or electrical engineering or naval architecture or by graduation from other institutions affording adequate preparation.

The course is laid out to furnish training in the design and construction of air-craft of all kinds and is attached to the department of naval architecture, being in immediate charge of Jerome C. Hunsaker, assistant naval constructor, U. S. N., who is detailed for this duty by the Secretary of the Navy. No attempt is made to give instruction to pilots in the operation and control of such craft, but the endeavor is to train men who are already engineers to undertake the experimental development of air-craft, their manufacture and maintenance. Previous preparation in physics, advanced mathematics, the strength of materials and machine design is, therefore, absolutely necessary, and the year required as a mini-

mum for the attainment of the master's degree is crowded with theoretical and experimental studies.

The Institute is fortunate in possessing an aërodynamic laboratory equipped along the lines of the celebrated English plant mentioned above, with a wind tunnel in which an air velocity of about forty miles per hour can be maintained for the testing forces and couples produced on model air-craft and parts, offering extended facilities for industrial testing and scientific research leading toward the production of specified results at reduced cost, verification of laws and formulas, the determination of new constants, checking of details in design, study of lift, impact, stability and many other elements of the problem of air transportation. The curriculum includes extended studies of fluid dynamics and of the dynamics of rigid bodies, wireless telegraphy, meteorology, explosion motors, and air-craft design in extended ramifications, leading to a thesis embodying the results of an original research in aëronautics.

It is to be hoped that this work will be a potent factor in the progress of aëronautical engineering in America, and that greater encouragement to scientific research will result from such a recognition of the importance of adequate training in this complex technical specialty. Italy and Russia long since established either governmental or university laboratories for aëronautical investigation, and the United States has lagged too far behind European nations in making use of the fruits of its own pioneer development. The results of a number of investigations conducted at the Massachusetts Institute of Technology are now in the hands of the Smithsonian Institution for subsequent publication, and the possibilities of coöperation seem attractive. There is little question that the interest of the public in military preparedness will embrace aviation, and if anything like adequate appreciation of the value and importance of technical investigation and education along this line is secured, an impetus to the further development of the art will be given which will be worth its cost many times over.—*Engineering Record*.

A vigorous shaking up of the dry bones of pacifism, done mostly in the objective spirit, and with a sense of what Huxley called "the majesty of fact," makes itself heard in a study of war just published
"Is War Diminishing?" by the Houghton Mifflin Company. Many of the dates for this suggestive book were gathered by Alexander Baltzly of Harvard University; the argument is the work of Dr. Frederick Adams Woods of the Massachusetts Institute of Technology. The conclusions reached are based on the period from 1450 to 1900, and the figures show that during the 450 years all the nations have given about half of their time, or 48 per cent. of it, to war, and half, or 52 per cent. to peace. England in comparison with other countries "has done her share of fighting, perhaps a little more." France furnishes no sign of a

shrinking from warfare. Russia has engaged in "an unusual number of wars," and her "war curve" declines only a little. Prussia shows diminution; Holland and Sweden are the only countries tabulated which have been able to avoid war altogether in any period of fifty years. The lesser nations, in fact, "saw a more complete decline in war than the greater." The general result is that while for the last two centuries European wars have been diminishing, the 450-year period as a whole yields only a "moderate amount of probability in favor of declining war years."

Dr. Woods severely arraigns the naïve, ill-informed attitude towards war revealed in so much of our current pacifism. Writing as a biologist, he maintains that "no group of men could have been evolved without the gregarious warring instinct," inherited, like all instincts, "in the germplasm." We are enjoined to weigh, "not only the evils, but also the possible benefits," of war. The selection brought about by war "must have its good side as well as its bad." Those who can shoot best and bayonet best are most likely to survive; hence war must mean a survival of superior strength and intelligence. Man has evolved somehow, and "if war is so deleterious, how did he get where he is?" Some of these are highly debatable points, and it is noticeable that Dr. Woods fails to set off against his "warring instinct" the increasing factor of human coöperation. But he is not arguing for war—he only wishes "to illustrate the complexity of the problem and the need of honest, systematic research." He is not decrying the desire for international peace—he only wants the pacifists to put their intellectual houses in order. If wars are not diminishing as fast as desirable the way is thus to open a more rational campaign for bringing them to an end. No evolutionist can believe that the peace ideal is there for nothing, and no pacifist will submit to the doctrine that war has been fastened upon man for all time by the very constitution of things.—*Boston Herald.*

BOOK REVIEWS

ENGINEERING AS A CAREER. By F. H. Newell, '85, M. I. T., professor of Civil Engineering, University of Illinois, and C. E. Drayer, secretary of the Cleveland Engineering Society. D. Van Nostrand Company, New York, 1916.

Books on vocational guidance have always been in demand. Some have been satisfactory and useful, while others have been valueless and even worse. In "Engineering as a Career," however, we find a volume which at the first glance shows itself worthy of commendation.

It is a self-evident fact that the most authentic information on engineering can be obtained only from engineers, and yet how often do we read books of this character in which one man, who has probably done little else but write, endeavors to advise the undecided youth just why or why not he should enter any particular trade or profession.

"Engineering as a Career" not only supplies authentic information on engineering, but even goes further and covers the numerous branches of engineering in a series of special articles written by specialists in their respective lines.

One of the papers, which should prove of interest even to those who have no further need of vocational guidance, is entitled "The Municipal Need of Technically Trained Men," by Rudolph Blankenburg, mayor of Philadelphia, and an authority on municipal affairs.

Discussing the labor problem in the large city, Mayor Blankenburg says:

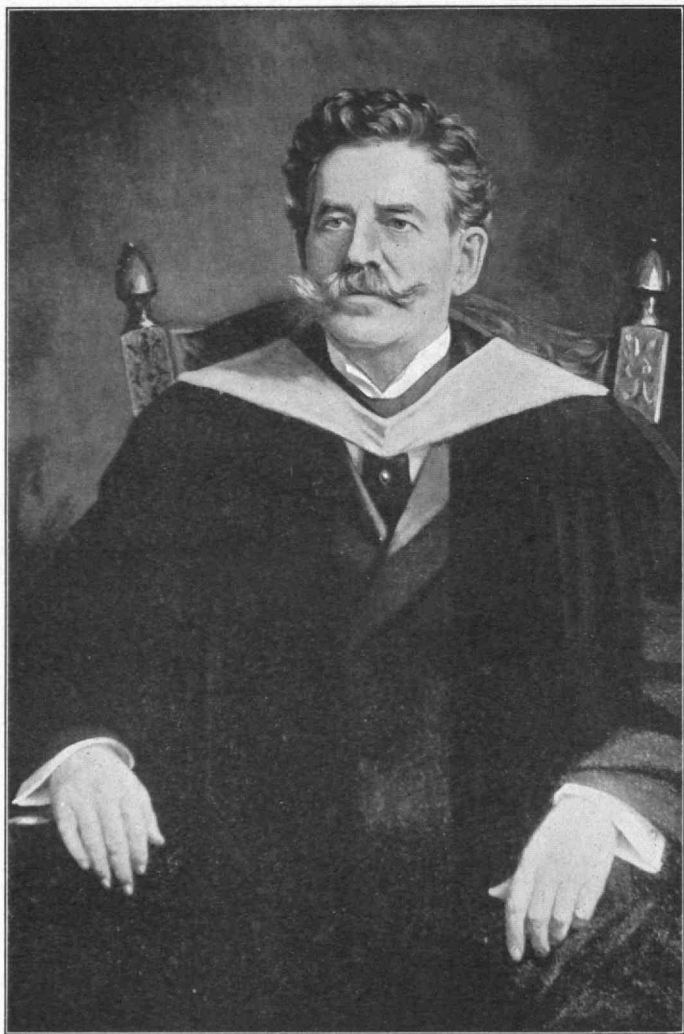
"Another striking instance of our present day attitude is the matter of selection of laborers. Four years ago if anybody had suggested that high-class physicians and other technical experts should be called to help solve this question, they would have been laughed at. A laborer was supposed to be somebody who was just 'a laborer,' and no one asked any further questions. The other day, in Philadelphia, out of 450 men examined for laborers, perhaps two thirds were rejected by the doctors and others who examined them, and rejected for perfectly obvious reasons. A great many of them were suffering from hernia and other maladies which clearly showed their physical disabilities for heavy work. At the present time the tests that these men are being subjected to are largely physical, but now everybody admits that there are tests beyond these that must be developed if the city is to be a model employer. We must be able to determine what the chairman of the Civil Service Committee has aptly designated as the man's 'singing qualities'; that is, the relative amount of joy he has in his work. A man who loves his work, no matter in what occupation, will do good work."

Speaking of the necessity for suitable reward for services, he states that in the past cities have had too small a number of officials with large salaries and too large a number of laborers at low compensation, and that if the city is going to place itself in the position where it can compete technically, it must learn that men with technical skill and training are commanding increasingly high salaries in private or corporate employ, and that only by meeting their demands, can such men be obtained.—*Brooklyn Eagle*, New York.

GEORGE WARD BLODGETT. A Memoir, prepared for the Class of 1873, by Henry Ayling Phillips, '73. Privately printed.

We are under obligations to Mr. Phillips for a very handsomely printed volume devoted to the life of George Ward Blodgett. This is one of the most complete biographical productions of any class at the Institute, and was inspired by the important pioneer work accomplished by his classmate. Mr. Phillips here chronicles the beginnings of the Alumni Association at the annual meeting of the class of '73 which was held January 23, 1874. Mr. Blodgett proposed that a committee of three be appointed to consult with the classes and the students who have graduated from the Institute to see what action might be taken with reference to the formation of an alumni association. Mr. Blodgett was made chairman of this committee, and the other members were William A. Kimball, '73, and Webster Wells, '73.

Mr. Blodgett was the inventor of an electric signal clock, which was used to a considerable extent in Boston, by which a signal bell is rung automatically for the starting of each train.



C. J. H. WOODBURY, '73

NEWS FROM THE CLASSES

1870

CHARLES R. CROSS, *Sec.*, Mass. Inst. of Tech, Boston, Mass.

J. A. Osgood, now living at Sierra Madre, Los Angeles County, Cal., who is a veteran of the Civil War, sends a clipping of a letter recently printed in the *Los Angeles Times*, in which he expresses his view on the value to the country of military drill in schools.

It was with deep regret that I read of the decision of the Los Angeles School Board against the giving of military instruction to the boys of the Los Angeles schools.

It seems to me that there is one phase of this question that has not been brought out in the many discussions on this matter; that is, we are not giving our boys a fair chance. In case of invasion, which I think is far from improbable, our boys of 16 to 21 will either be a help or hindrance to our cause.

Imagine two visions—in one I see our boys gazing at the invading veterans of the enemy and standing with mouths agape, ignorant of the first step in defense like a flock of sheep. Later, I see the officers of the enemy seize these boys by the collars and kick them into the field or shop with brutal orders to go to work for them, as is the case in Europe.

Vision No. 2—I see our boys well drilled of manly shape, and full of confidence in themselves rush for their armory, fall into the well-known places in their military companies, and commanded by their own well-drilled officers, present a front of solid steel to the invaders.

In place of ignorant recruits we would have an immense army of well-drilled soldiers. The very fact that our having such an army in reserve would, of itself, prevent war being made upon us.

The boys of '61-'65, North and South, did not raise their boys to be cowards. No veterans of the war want to have a war or see one, but they all do want our country to be prepared, and they do want their grandsons to be ready to jump to the defense of our country, like brave men, and not be one of the rear guards in that line of those taught by unwise mothers, singing the cowardly song, "I did not raise my boy to be a soldier."

The great host of noble and patriotic women of our land are surely no less patriotic than the mothers of '76, 1812 and '61.

Fathers and Mothers:

The boys of today are all right, give them a chance to learn how to defend themselves, and our country.

J. A. OSGOOD,

Capt. in the War for the Union.

The secretary is sure that Mr. Osgood voices the sentiment of the great body of Tech men.

1873.

SAMUEL E. TINKHAM, *Sec.*, The Warren, Roxbury, Mass.

Charles Jephtha Hill Woodbury was born in Lynn, May 4, 1851, and had always been a resident of that city. He died March 20, 1916.

He was a direct descendant from John Woodbury, one of the

leaders of the Dorchester Bay Colony, who settled at Cape Ann in 1623, and afterwards went to Salem, before the arrival of Endicott and the Colony of Massachusetts Bay, in which he was one of the leaders; and the family has, since that time, been prominent in colony, province and commonwealth.

He has been vice-president of the Old Essex Chapter of the Sons of the American Revolution, president of the Lynn Historical Society, and secretary of The Whiting Club, a small literary organization.

He prepared for Harvard University in the Lynn High School, entered the Massachusetts Institute of Technology, where he took the course in civil engineering, in the class of 1873.

He began the practice of his engineering profession in the city engineer's office, in Lynn, during his vacations while at the Massachusetts Institute of Technology, and later was superintendent of a mill in Rockport. In 1878 he became engineer, and later vice-president, of the Boston Manufacturers Mutual Fire Insurance Company, in which position he made many investigations on lubricating oils, mill construction, automatic sprinklers, in which he invented several improvements, electric lighting, for the purpose of providing conditions of safety against fire; and organized the later methods of inspection system and reports upon mill property. In 1894 he became assistant engineer of the American Bell Telephone Company, which position he held until its removal to New York, late in 1907; since which time he was in private practice as a consulting engineer.

He was also secretary of The National Association of Cotton Manufacturers, from 1894 to date, and has edited its proceedings, and prepared numerous papers for that organization.

He was a member of a number of engineering and scientific organizations, among them being the American Society of Civil Engineers, the American Society of Mechanical Engineers,—formerly vice-president; the American Institute of Electrical Engineers, Fellow of the American Society for the Advancement of Science, corresponding member of the American Numismatic Society, member of the Bunker Hill Monument Association, the Engineers Club of New York, the St. Botolph Club of Boston, and the Oxford Club of Lynn. He was an honorary member of the New York Telephone Society, and of similar organizations; and was a member of the Telephone Pioneers of America. In these various connections, he has been an extensive writer on historical, engineering, and economic subjects. While with the Telephone Company, he was selected by that corporation to represent them in public in a great many addresses upon the commercial and economic aspects of the telephone system.

He received, for his work on mill construction, the Alsatian Medal of the Société Industrielle de Mulhouse for 1893; being the only medal of that organization which ever crossed the Atlantic.

Two years later, for the preparation of what is known as Insurance Rules on Electric Lighting, he received the John Scott Medal, on the recommendation of the Franklin Institute of Philadelphia; and in 1910, the annual medal of The National Association of Cotton Manufacturers, for a work on the Bibliography of the Cotton Manufacture. In 1893, he received the degree of A.M., from Tufts College; in 1906, the degree of Sc.D., from Union College, and two years later, the same degree from Dartmouth College.

In 1878 he married Maria H., daughter of the late Joseph G. Brown, of Lynn, and they had three daughters.

Although Mr. Woodbury had not been in good health this winter, and had recently been going to his Boston office but once a week, his sudden death comes as a shock to a wide circle of friends. The members of the Whiting Club, the literary organization which he long served as secretary-treasurer, were to have presented him on the evening of the day on which he died with a silver bowl inscribed, "Presented with affectionate regard by the members of the Whiting Club to the secretary-treasurer, Charles Jephtha Hill Woodbury, Sc.D., at the 100th meeting, March 20, 1916."

From the Buffalo (N. Y.) *Evening News* of February 22 we note that Edmund Hayes has given to the University of Buffalo, the sum of \$225,000 for the purpose of erecting the first and central building of the proposed groups of structures which shall constitute the University of Buffalo. This gift by General Hayes is conditional, the offer providing that it shall become effective if the people of the city of Buffalo raise by subscription \$1,000,000 with which to endow the Greater University of Buffalo, the million dollars to be raised by June 6, 1919. The central university building, for which the gift of General Hayes will provide, is to be designated as Edmund Hayes Hall.

1875.

EDWARD A. W. HAMMATT, *Sec.*, 15 Water Street, Newton Centre, Mass.

The Thirty-fourth annual meeting and dinner of the class of '75 was held at Young's Hotel, Boston, March 10, 1916, at 6.30 p. m.

Either the secretary was late, or some of the men were early, as he found some ahead of him, which was very unusual. Interest in the June Reunion may account for it. The usual social hour soon passed, and when dinner was served there were seated at the table Messrs. Beal, Bowers, Dorr, Eddy, Hammatt, Hibbard, Plimpton, Simonds and R. B. Smith. President Hibbard called to order for business at 9 p. m. The records of the previous meeting were read and approved. The reports of the secretary and treasurer were accepted and ordered placed on file. Vote for officers, as usual, resulted in the reelection of the old board.

A vote of thanks to Hammatt for his work on the class book was passed. After considerable talk relative to the June Reunion, with particular reference to class dinners, it was voted "That '75 have a dinner some time during the Reunion week." After further discussion a vote was passed that this dinner be held on Monday, June 12, at 6 p. m., at some place other than the City Club; all arrangements to be in the hands of the Executive Committee. Hammatt said that if it could be arranged, he would like the class to be his guests at Camp Quanset for a day. What and where is that, said some one. Camp Quanset, the Cape Cod Camp for girls, is located in Orleans, Mass., and owned by Mrs. Hammatt. As the camp season will not open till July 1 it would give me pleasure to welcome the class there. Can offer a chance for a good swim to those who enjoy it, tennis, a shore dinner, and a sail on Pleasant Bay. If it can be arranged, would suggest that the trip be made by auto.

Hammatt was requested to take such action as seemed best to secure the necessary information to decide whether or not the idea was practical.

A few changes of address were noted by the secretary, viz.:—Quincy Kilby is located at 260 Aspinwall Ave., Brookline, Mass.—J. Merrill Brown is said to be at 515 Carlton Road, Westfield, N. J.—C. A. Church has gone South again, exact address not known to your secretary.—Frank H. Pierce, is at 18 Beers St., New Haven, Conn.

Pierce was the first class historian, being elected to that office October 30, 1871, and I note that he was a member of the second committee appointed to select an Institute color, when it was found that lilac was preëmpted by some college. I had not known his address until very recently, and am very glad to get in touch with him.—Several letters were read. Adjourned at 10.45 p. m.

'75 Looking Backward

What a change has occurred in the appearance of the section of the city in the vicinity of the Institute since the days when we were students. When we entered, the Institute comprised one building, now known as "Rogers," and almost everything to the westward was vacant lots, with only the streets filled to grade. It almost seemed as though we had reached the jumping off place when we arrived at Tech. On the lot next the building, where "Walker" now stands, the boys used to play baseball or football during the noon hour; and a little later the M. I. T. Cadets used to drill there.

Our practice in surveying, staking out railroad curves, etc., was all given on these vacant lots, between Clarendon and Dartmouth streets, except for the survey of the Ross estate and the running of a short railroad line out in Brookline. Among the professors and instructors who first came to the Institute during

our time, was Gaetano Lanza, S. Edward Warren, T. Sterry Hunt, George H. Howison, Charles P. Otis, Lieut. E. L. Zalinski, Webster Wells, Jules Luquiens, Henry N. Mudge and William E. Nickerson. Lanza used to have our class in algebra, and on Saturday mornings, when the divisions were combined into one, he was frequently hazed most unmercifully. S. E. Warren came to us from Troy, N. Y., and his nickname of "Windy" came with him. Almost the first thing he did with '75 was to suspend the whole class in "Descriptive," but only a few lectures were missed. I recall a cartoon which appeared on the blackboard in the drawing room one morning, showing a railroad train, in the doorway of the baggage car a large trunk, with the letters S. E. W. on the end; and a check marked Troy, N. Y., attached. One morning later in the course, some of us in the drawing room thought that the chemical laboratories must have become surcharged, there was such a strong odor perceptible. In a few moments the members of one of Warren's classes in the next room came rushing out, and we found that some one had set in operation a jar of H_2S —which had broken up the class.

How well I remember the first appearance at military drill of Lieutenant Zalinski. Many of the boys thought he was putting on airs when he came into Boylston Hall arrayed in full dress uniform to report to Colonel Moore—and how wrathful he was when, upon assuming command, he gave the order; "Right forward, fours right—*Huh!*" and no one moved.—We simply did not understand his language, and that *Huh* meant *march*. Shortly afterward he introduced the setting-up drill, and one day considerable hilarity was occasioned when one of the boys who wore a pair of very tight pants, had them split open during these exercises. Later on, we used to drill on the vacant lot where the Walker Building now stands, and then came the gymnasium and drill shed erected thereon and how important some of the officers appeared, when ordered to duty on a court martial to try Cadet A. C. Duncklee!

So far as I know, the first effort to secure a "color" for Tech was made in 1872 as a class meeting was called on January 18, 1872, to hear the report of the joint committee of the various classes on this subject. The report was in favor of lilac, but it was soon discovered that some college had a prior claim to this color, and the matter was dropped. My impression is that the colors finally selected, viz., cardinal and silver-gray, were adopted just previous to the centennial at Philadelphia. The first student paper to be published at Tech was the *Spectrum*. At a meeting of the class of '75 early in 1873, H. L. J. Warren proposed that '75 publish a paper. The committee appointed to investigate the matter reported it advisable, and a board of eight editors was chosen to take charge. This board was made up of the following men from the class, viz.—Henry N. Mudge,

W. H. Dabney, Jr., J. B. Stanwood, Amos E. Boydon, J. H. Head, E. H. Lincoln, O. P. Stimson, and H. L. J. Warren. The first number was dated February 22, 1873. The time had not come when such a publication could be supported and, after publishing three volumes, it went out of existence.

I wonder how many of the boys recall the incident in the physiological lecture when Warren, as he passed to his seat, placed a chalk cigar in the mouth of the skeleton, entirely unobserved as we all thought by Professor Kneeland, who had not yet come in from his office. "Sammy" was wise, however, and during the lecture he brought down the house by some dry allusion to the matter.

Also what a racket the architects used to make when they tobogganed down stairs on a D. E. drawing board.

During the Boston Fire, the Tech Battalion volunteered its services, and detachments were assigned to guard duty on Monday, November 11, 1872. About this time Henry Mudge deserted the class and became instructor in drawing in charge of the first year drawing room; and as he felt it to be his duty to stop (or at least attempt it) all noise in our drawing room, he was hazed tremendously. A new system was introduced at or about this time, so that instead of keeping each class by itself throughout the four years, they were assigned drawing rooms by departments and as there were no social activities, or organized athletics, very little class spirit developed. There was some discussion early in 1875 as to having class day exercises at graduation, and the secretary of the class was authorized to confer with the Faculty about the matter. I do not recall that any action was taken; at any rate, no class day or other exercises took place, but I have been told that '75 was the first class to suggest the matter.

1877.

RICHARD A. HALE, *Sec.*, Lawrence, Mass.

George J. Baldwin who has represented Stone & Webster interests in the South in many localities, has taken the position of vice-president of the American International Corporation, 55 Wall street, New York, and is extremely busy with the details of the business. This corporation is an outcome of Stone & Webster's various interests which has recently been organized.—J. W. Beal writes that he will be unable to attend the class dinner this year. He has two sons connected with him in his architectural work and a third son in the capacity of a landscape architect.—Henry H. Carter writes one of his characteristic letters from Pass a Grille, Fla., to the secretary as follows:

This is about the time of year I generally receive a letter from you to the effect that the class dinner comes off tomorrow, and inviting me to be present. As I am generally 1,000 to 6,000 miles off, I have to pass up the invitation, as I shall

this year. Last year your letter caught me at Galveston and I sent a letter which undoubtedly arrived too late, so this year you can read last year's letter and this one at the same time. I had my boat repaired at Galveston last year and sent her over to the Florida coast as I wanted to try that this year. My wife and I then went to San Diego, Cal., where we took in the Exposition. Thence to Los Angeles where we have many friends and stayed two weeks. Then took an automobile and motored up to San Francisco. Took a week to do this over the worst roads (some of them) that I ever saw. Stayed in San Francisco a week and the last of March sailed for Honolulu again. This is one of my favorite stamping grounds and one of the best places God ever made. In May we sailed for Japan and spent two months there. Our old M. I. T. classmate, Hariosh Mori, has passed away. He died long ago before he ever amounted to anything. Takuma Dan, '76, is very much on earth, or was last year when I visited him at Tokio. He is a partner in "Matusui and Company" the firm in Japan that corresponds with J. P. Morgan's in this country. He has a magnificent place right in Tokio about twelve acres, all walled in; with gardens, lakes, etc., and has all sorts of money. He is something like John D. Rockefeller, however, no stomach. So I don't see that he gets as much out of life as some of us poor devils who don't have millions. Came back from Japan in July after a very pleasant trip. My second one, by the way, as I was there in 1899. The country had not changed much. It is now one of the few civilized countries left on this globe. They don't have all the fool laws we have in this country interfering with your personal liberties, and it is really a pleasure to go there.

Spent three weeks again in San Francisco looking over the Exposition and also was invited to go to the "High Jinks" of the Bohemia Grove up in the red wood district for ten days. Then went to Lake Tahoe and spent three weeks. Then to my place at Crane Lake in Saskatchewan where I shot ducks, geese, and prairie chickens until October 25. Then to Boston until November 20, when I made my annual trip to the Santee Club in South Carolina, duck shooting, and on December 10 arrived in Fort Myers to join my boat on which I am at present with my wife. We cruise the Florida coast till March and then sail for Honolulu on March 22.

A note from E. G. Cowdery of Chicago states that he hopes to attend the All-Tech Reunion in June.—Professor G. F. Swain is always an exceedingly busy man but in addition to his lectures at Tech and matters connected with the Boston Transit Commission, here is a list of additional matters that he has on hand:—

Consulting engineer for the city of Cincinnati on its new subway scheme; chairman of a committee of the Society for the Promotion of Engineering Education to visit the Graduate School at Annapolis, at the request of the Secretary of the Navy and to report with reference to the work done there. The committee visited the academy last month. Retained by the city of East Orange, N. J., to report on the elimination of grade crossings on the Delaware, Lackawanna & Western Railroad through that city. Have been appointed a member of a commission to investigate and report on the port and terminal facilities of the city of New York, but as no appropriation has yet been made, this work has not yet started. Am a member of a commission to apportion the cost of alterations on the Broadway bridge in Everett; a member of a commission to apportion the cost of the Chelmsford Street bridge in Lowell; also member of a good many grade crossing commissions, but owing to the railroad situation little or nothing is being done at present regarding them.

W. M. Whidden of Portland, Ore., writes that he expects to be in Boston the latter part of June as he has a son who will graduate from Harvard at that time, but does not think he can attend the big Reunion.—C. L. Harris is actively engaged in farming at Chelsea Farm, Sabula, Missouri, and hardly expects to attend the

Reunion as it will be a very busy time with him with the growing crops. Apparently he is a successful farmer.—Elliot Walker has been connected with the General Electric Company at Pittsfield, Mass., for the last seven years. Previous to that time he was with Lee, Higginson & Company, and other banking houses, also with A.H. Rice & Company, silk manufacturers of Pittsfield. For recreation he took up literary lines of work from 1900 to 1909 as writer of short fiction contributing to many magazines, *Munseys*, *Everybody's*, *Pearson*, *The New England* and *Christian Endeavor World*, *The Independent*, and various household publications. He hopes to take up the work again as opportunity offers.—Herbert Jaques has been an untiring worker on the Serbian Relief committee devoting a large part of his time to this most worthy cause.—Charles B. Wheelock, was reelected commodore of the Corinthian Yacht Club of Marblehead, Mass., at the annual meeting held at the B. A. A. January 12. Wheelock is an enthusiastic yachtsman and has a fast boat.—George H. Kittredge has gone to Florida for a short vacation and was unable to attend the class meeting.—E. G. Taber writes from Spokane, Wash., as follows:

My daily routine is practically the same as it has been for a number of years. Our Land Company is doing very little except the routine administrative and repair work and the railroad the same.

Development of water power is going on slowly as the demand for power is not increasing much in this part of the country.

There is an examination being conducted, of the physical features of the Cañon of the Pend d'Oreille River at or near Metalline Falls, Wash., with the view of constructing a large hydro-electric plant when the conditions necessary to success have been brought about.

Our Washington Water Power Company is experiencing very discouraging conditions following their latest heavy investment in their "Long Lake" development on the Spokane River.

Their market instead of growing rapidly as was the case when they decided to build, has shown signs of falling off under some encroachment and the effects of "hard times."

Farming, however, is going on at good returns,—in wheat particularly—although the dream of the orchardists has been badly shattered. I have a small tract which is all in apples and this year a few of the trees are bearing. I may get a net return of 50 cents per tree at this first attempt, but the supply promises for a few years to be greatly in excess of the demand.

Shall try to find time to come East soon and if I do will try to see you.

W. L. Hallett writes from Denver that he is sorry he cannot attend the Reunion, but sends good wishes to the boys but does not state what he is doing.—Joseph P. Gray is spending a few months' vacation in the South, principally in Florida.—W. H. Lawton writes from Newport, R. I., as follows:—

I have just received your letter of the 12th and am always glad to hear from you and very much interested in everything pertaining to the Tech. For the last six weeks I have been touring Southern California and only arrived home yesterday.

I am very much pleased with the glorious country of California and was sorry to learn out there that the last two years had been very bad for them in a business way. The citrus fruit industry is overdone and if it were not for their petroleum they would have been in bad shape.

I saw miles of orange groves much of the fruit being on account of its size unsalable. The grapes are better. I saw one farm of 4,000 acres.

I shall be unable to be present at the class dinner tomorrow but hope to be up in June next.

E. C. Woodward, assayer and chemist, writes from Colorado Springs, Col., as follows:

Sorry I cannot attend the class meeting.

The boom in business has not yet got around to gold and silver mining as they are not in the war-bride class, but we hope most of the extra cash will spill over into it. Cripple Creek is doing well and the most of my work comes from there. Just now tungsten is what all are looking for. Sixty per cent. ore is \$3,000 per ton or \$2.50 per pound for tungsten contained.

When the engineers were here a few years ago I hoped to see you but learned you were not in the company. Should you or any others of the class come this way I'd be much pleased to see any or all.

The recent purchase by the Bethlehem Steel Company of the Pennsylvania Steel Company and the Maryland Steel Company is of considerable interest. The *Boston Transcript* gives an account of the probable expansion at Sparrows Point as stated by Eugene G. Grace, president of the Bethlehem Steel Corporation. There will be between \$10,000,000 and \$20,000,000 expended in enlargements at Sparrows Point. The present works and organization are excellent, but the increase would provide four new blast furnaces which would double the present capacity of pig iron; a merchant mill, tin plate mill and a plate mill. The shipyard will continue to specialize in merchant ships and other shipyards owned by the Schwab interests will care for other class of work. Large sums will be spent in the marine department to enlarge it and the present force of 3,000 men will probably be increased by 1,500 men additional. A needed addition will be a large dry dock which will be built. When all improvements are finished work will be provided for about 10,000 men or double the number at present.

F. W. Wood, '77, the president of the Maryland Steel Company, is to be congratulated on the success of the plant in the past and the additional responsibility which he will assume in this enlargement.—A monograph on the "Manufacture and Uses of Alloy Steel" by Henry D. Hibbard has been issued by the U. S. Government, Department of the Interior, Bureau of Mines, *Bulletin* 100, August, 1915. It contains much interesting information to engineers as well as metallurgists and is a valuable contribution to the steel literature of the present day as presented by one who has authoritative knowledge of the subject.

The thirty-ninth annual dinner of the class was held at the Engineers Club, Boston, March 1. President Herbert P. Jaques presided.

Those present:

John Alden, chemist at Pacific Print Works, Lawrence; Robert D. Andrews of Andrews, Jaques & Rantoul, architects, Boston; Francis H. Bacon & Company, furniture and interior decorators,

Boston; George W. Capen, architect, Canton Corner, Mass.; Arthur Everett, architect and former building commissioner of city of Boston; W. E. Fairbanks, with J. E. Ferrell & Company, Boston; Richard A. Hale, principal assistant engineer of the Essex Company, Lawrence; Herbert P. Jaques, architect, of Andrews, Jaques & Rantoul, Boston; C. F. Lawton, former commissioner of public works, New Bedford; C. H. Norton, assistant engineer Massachusetts Highway Commission; Frank E. Peabody of Kidder, Peabody & Company, Boston; H. A. Southworth, in business, Stoughton; George E. Swain, professor of engineering at Massachusetts Institute of Technology and Harvard University and consulting engineer on various important projects.

The officers elected for the ensuing year were: Herbert Jaques, president; B. T. Williston, vice-president; and R. A. Hale, secretary and treasurer. Plans were discussed relative to the All-Tech Reunion in June at which time the dedication of the new buildings will occur, and a committee consisting of the president, secretary and Mr. Andrews was appointed to make arrangements for details.

This class originated the Institute colors consisting of cardinal red and silver gray in 1876, and these colors have been adopted and used since that time.

Letters of regret were received from various members who could not attend the meeting.

The secretary had the honor of being elected president of the Boston Society of Civil Engineers at the annual meeting held March 15 at the City Club, Boston.

1879.

CHARLES S. GOODING, *Sec.*, 27 School Street, Boston, Mass.

On September 13, 1915, your secretary sent out notices to the different classmates asking for reminiscences of Institute life to be published in the *TECH REVIEW* for April. Not having received any reminiscences, on February 28 another letter was sent out asking the members of the class of '79 to contribute information to the April *REVIEW* which is to contain reminiscences of Institute life. In this last letter the secretary notified the members that if they did not send some reminiscences he would make up a few about them. This seemed to wake up quite a number of the members of the class, with the result that some very interesting contributions were received which are hereinafter published.

Some of the members were so startled at the threat that the secretary was going to print some reminiscences about them on his own initiative that they apparently did not know whether they were writing reminiscences of Institute life or autobiographies. For their particular benefit the definitions of the words are herein set forth:

"Autobiography," the history of a person's life written by the subject of it.

"Reminiscences," happenings recalled to mind.

The following are some reminiscences which are very interesting and will carry you all back to about—no, I won't say how many years. First, we will read something from Jack Cabot:

In turning over some old papers recently, I fished out a program of the graduating exercises of the class of '79.

It was a memorable occasion, as I remember it. President Rogers had returned to the direction of Technology affairs, and we were the first class to have these graduating exercises, and to have them while he was still in office appealed strongly to our sentiments.

His address was brief, simple, business like, dignified, as befitting the first graduating exercises of the first technical school (as we thought then and still think) of the land. On that occasion, there were, he told us, to be no flowers, either of rhetoric or any other kind, cut or uncut. And of course, at that period there were at the Tech few uncut leaves, though a few, very few, cut lectures.

As to "females"—he used the very word—females, well, they were to be held to a strict accountability, or words to that effect anyhow. But I think we young men felt it was a privilege to "go forth" under such auspices, bearing the personal "God speed ye" of the distinguished man to whose inspiration Technology owes its existence.

Looking back to the middle 70's one has the feeling that probably the ordinary run of students realized that after giving the amount of time that the Faculty appeared to consider desirable to laboratory, drawing board, outside surveying, lectures, recitations, "independent reading," essay writing (alias "compositions"), incidental preparatory study of the lessons, military drill, artillery drill, lectures on military science and a few more things, I don't think of at the moment, and after having seized a spare moment here and there for such unimportant matters as sustenance, sleep, and physical exercise in Gym, or outside field games, there wasn't a great deal of extra time for the pleasant cultivation of the small vices.

But, nevertheless, we managed to snatch a good deal of pleasure as we went along. For instance, the semi-professional summer excursions—of the miners at least—were always delightful, as they necessarily had to be, under the genial and considerate direction of our older brother, Professor Richards. Then the expedition of the battalion to the "Centennial" was a "joy ride" from beginning to end. About that time we had a Rifle Club, whose members practiced shooting with the Springfield rifle, as well as with a smaller calibre weapon and also improved their aim by firing at the candle flame with the rifle and a percussion cartridge. Then as now Tech men were Prepared (with a large P), and as ready to seize their rifles, hanging over the fireplace, if need be, and "Fall in," as were the Minute Men. Hurraw! We also had prize drills under the supervision of our West Point commandant with his glorious and fearsome red horse-hair plume, hanging down over his beetling brows.

(SECRETARY'S NOTE: Another ideal shattered; I always thought that plume was real ostrich. Ah well!)

But our enterprising and genial commandant has long since passed on, and let us in this great country realize that we shall have no occasion to put his instructions in practice: "Char-r-ge—Bayonets!" just yet. We shall not need to rummage in the attic for our old military commissions and warrants to prove the valor and preparedness of "Co. A" and "Co. B" in the 70's. We are not going to war with anyone.

"But by golly, if we do,
We've got the men,
We've got the 'mun'
We've got Technology too."

(SECRETARY'S NOTE: When I received these reminiscences from Cabot I was impressed with his great ability, even more than I had been before and immediately wrote to him and told him that he would make a much better secretary than I do and I was going to resign in his favor, in reply to which I received a cry of distress and remonstrance. Would not be secretary and could not be the secretary was the gist of it.)

Listen to these reminiscences from "one of the finest" in Company B—Phil Little:

The threat contained in your last letter, that you would write reminiscences of '79 whether you had any or not, was too much for me, although I supposed that my autobiography sent you and published was quite sufficient. I do not feel that my recollections can be of any great value, historically or otherwise, for you must remember that I was a "special," or considered myself so, though put down in the 1904 catalogue as a regular, tried to get killed by having typhoid soon after entering in 1875, and was taken out of the Institute in 1876 and put into business by my father. I considered at the time that my respected parent was trying to put a square peg in a round hole in sending me to the Tech, for mathematics and machinery did not appeal to me, and he increased his efforts when he put me into business. Artists are never good business men, as a rule. But to return to the reminiscences. I regret that I have not the pen of a Kipling to grace the pages of the REVIEW with artistic rendering of some of the very commonplace incidents of a year and a half during which I attempted to keep up with the curriculum. Why worry about "Preparedness" when we recall that wonderful band of military experts who trained under the martinet eye, and tactless régime of the great inventor of the dynamite gun, later to be used in '98 at Santiago de Cuba, and not unlike its inventor, as I knew him, making many threats as to what would be done, and accomplishing—not so much! I had the misfortune to meet the redoubtable regular at my own home, as he was very attentive to a member of my family, and the blandishments of the captain in the house, and the growl and tongue lashing of the same person on the drill grounds, made me a little callous as regards the "woes of Poland" talked of so much of late.

Do you remember Takeo Mitsuoka? I was next to him in the laboratory, and one day Professor Nichols, in his most sarcastic voice, said, "Mr. Mitsuoka, if you continue that experiment one minute and a half longer, there will be an explosion," and with his jeering laugh moved on. Mitsuoka grinned at me (I remember the expression on his face still, it was so curious), and motioned with his hand for me to move to one side, Nichols being beyond me quite a bit, but otherwise there was clear field between Mitsuoka and his target. I moved, without thinking for a moment what might happen, when the Japanese shifted his position as quick as a flash, an equally quick motion of his hand "speeded up" his experiment, and crash! The glass tube went across the room, barely missing the professor's head and breaking through the door of the glass cases in the old laboratory, smashed up some things therein. Mr. Nichols turned and looked at Mitsuoka, but something in the latter's face apparently stopped any criticism, for with a queer half smile he left the room. Mitsuoka—I saw quite a little of him—explained that the professor had, in his opinion, insulted his intelligence at various times, and this was the last straw, so he tried to bomb him! The class had to pay "general breakage," I suppose!

Speaking of "Preparedness." I was looking at a photograph of Miller's Battery, A. D. 1876, I suppose in what is now Copley Square. It seems useless to look for a design for the center of that square, alleged square, after casting one's eyes over the manly forms, and "frowning guns" (see war correspondents of old times, now it is "curtain of fire," "gas," etc.) depicted as standing ready to knock everything and everybody into smithereens! Also in the military line I recall "Dick" Morgan who stuck a two-cent stamp on the back of a high white collar, of which I was very proud, in recitation one day, and who was much disturbed when I asked him

impertinently one day before drill (I was a high private and he was a captain) if his beautiful collar was paper. He did not know whether to be insulted or not and said so. I told him to find out and let me know. I was an impertinent young man, I fear, and did not realize military dignity and etiquette as well as I did later and do now. Dick has probably forgotten this but I have not. It is the useless, trivial things that stick in our heads at times and will not down. Then there was Henry Hall, holding various non-commissioned offices, the names of which have escaped me, and probably Henry, which, as far as I could make out, were invented to keep him from attending drills and worry poor old Zalinski. Henry was, and is, a thoroughbred Yankee, full of expedients, detesting drill because he had had too much of it in public school, but later becoming an enthusiastic officer in the naval brigade, and the way he dodged Zalinski, putting up all sorts of arguments and reasons for escaping drill, and it seemed to me that he used up more time inventing and carrying out these nefarious schemes than he would have had he drilled regularly. But it pleased Henry, and it bothered the life out of our instructor, so what more could one ask? Speaking of expedients, the way in which the division of which I was a member used to get through the hour of English literature without reciting was wonderful. The subject was in the hands of that dear old gentleman—the word is appropriate—William Atkinson, and it was soon discovered by some of his graceless pupils that Mr. Atkinson could be induced to give an hour's lecture on the matter in hand by ingenious suggestion. It seems to me that my division had some idlers whose ingenuity was misplaced, as I look back on it, but they were merely very much alive boys, and their pranks are as old as the centuries. I regret to say that we "worked" the old gentleman in good shape! I married into his family, but it is needless to say that I never told the Professor how carefully the division avoided reciting English literature in 1875-76. I recall with pleasure the German professor (was his name Otis) and I have great doubts about his siding with "*Me und Gott*" as I remember his gentle courteous manners. Professor Lanza and others of the Faculty, some gone, some still living, I have dim recollections of, and often wonder how they ever had so much patience. These seem to me to be about all the reminiscences I can collect, but I will say one thing that should not be allowed to pass into oblivion, and that is, that '79 started athletics in Tech in my opinion, selected the colors, whether you like them or not, and generally were a pretty alive crowd of fellows. I regret that I have not been to the class dinners, but it has been an impossibility, yet I hope I shall see the June 12 smoker without fail.

We have several professors in our class. There is Professor Pickering in Jamaica and Professor Lodge in California and we are so fortunate as to have with us, in Boston, Professor George H. Barton, and he has favored us with the following reminiscences of '79:

In common with Vibe Spicer, Bill Strings (alias Stearns), Harry Fullerton, George Blake, Fred Waite, Henry Curtis, Mitzuoka, Josh (alias J. Edson) Young, and several others I came to Boston on the Warren Scientific Academy in Woburn one hot June morning to pass the entrance examinations for the Institute.

Of the twenty that came, ten passed with no conditions and ten with one or more conditions. Two, Harry Reed and Takuma Dan, entered the second year, and two others decided not to enter when the autumn came.

One morning, soon after the term began, some member of '79 seeking information was told by a sophomore that Billy Rip would tell him. Asking where Billy might be found he was told to step inside and ask the first one whom he might meet. On entering he encountered a tall man of dark complexion, with black, somewhat curly hair and whiskers. Asking this gentleman where Billy Rip might be found he was greeted with a rather severe frown and told that someone had been making fun of him. You can imagine who it was that he asked.

While in camp at Philadelphia it was my fortune to be placed on guard one night just before a heavy thunder-shower struck the camp. At one end of my beat was a large packing case, open on one side, which supported the locomotive

headlight that illuminated the beat. Not relishing the prospect of a drenching I crawled into the box and there remained until I heard the approach of the corporal's guard to relieve me. I then turned out, met the guard at the other end of the beat, saluted, and astonished my comrades by my dry appearance after passing through a severe shower.

I have various other memories of our life in Philadelphia, such as often being stopped on the street by some pretty girl and after a short chat having her remark "I am sure that Mamma would be glad to have you call at—" giving the street and number of her house; of the pretty Tunisian dancer where we paid a half dollar for a cup of coffee with the privilege of watching the dancing while drinking it; of Fox's Variety Theater where our students studied anatomy; of various attempts to run the guard when we had forgotten the countersign; of one of our class insisting on passing the guard without giving the countersign and in consequence having a bayonet thrust through his leg; of our taller classmates stealing the flags from the top of the car as we rode back to camp and we shorter ones dropping off the car to pick them up and carry them to camp; and of the Haynes' Suspension Bridge on exhibition in the Fair of which, later when on exhibition in Boston, Professor Vose said, "I would not walk over it if God himself had made it."

I have also pleasant memories of a trip down Boston harbor to Fort Warren over whose ramparts we played tag and catch and of the singing of *Das Grab ist tief und stille* on the return voyage, and of various occurrences in the chem. lab., as when Campbell was indulging in some strong remarks he suddenly heard a voice saying over his shoulder, "I will do all the swearing that is necessary in this laboratory," and, looking up at Professor Wing, who had come in unseen, Harry replied, "All right, Sir!" And of the time when Hosmer had an experiment going on, which should give a certain color if progressing correctly, was replaced by McFarlane and Stantial in Hosmer's absence by one having exactly the wrong color which caused Hosmer on his return to rush to Professor Wing with the supposed result and being greeted with a laugh as the two came back to find the correct solution with its correct color in its right place.

Before coming to Tech I had taken as much botany as seemed to be required in the Institute course and was excused by Professor Ordway from attending the lectures, but was to take the examination at the end of the term. When this came I found that the questions related to things of which I knew little and, not wishing to be conditioned, I wrote an "Essay on Botany," without answering a single question in the examination, hoping that it might possibly get me by. Much to my astonishment I not only got by but received a "C."

One day in the class in physics Professor Cross was at the top of the tall step ladder about to explain Atwood's machine to us when Gooding sang out, "Charlie, come down out of that." It is needless to say that "Charlie" came down. Then turning to the class said "Gentlemen, it is understood that when an experiment is being performed if there is any disturbance the experiment is stopped at once but the class is held as responsible for understanding it as if it had been made. That is all, gentlemen." Then he went on as if nothing had happened but some of us owed Gooding a grudge for a while.

(SECRETARY'S NOTE: This is where the secretary proceeds to clear his reputation of a base libel. I never said it, but I sat beside of the one who did say it. We were said to look very much like each other and I always took that to be a great compliment, for he was a very handsome young man. Now, guess who it was! I would not give him away after all these years when he has settled down into a very much respected member of society—one of the most opulent members of the class, residing in Worcester, his first name being George. I do remember that we all decided, in view of this little unpleasantness, that it would be wise to be well posted on the said experiment at the semi-annual examinations, so we all

studied up on it in good shape and subsequent events showed our wisdom in so doing.)

It has been the secretary's painful duty to censor a portion of the following reminiscences received from ————:

I received your communication of February 28, 1916. You can rest assured that I do not intend to have you make up any reminiscences about me and, therefore, I have taken time from a very busy day to write you the following:

.....

I do not know whether you remember this occurrence but I do more clearly than I do my differential calculus.

Trusting this will be of service to you and hoping to be with you on the 12th of June I remain.

The following letter from Stantial just proves to the secretary something he has always suspected and that is that Stantial does not care what he does say:

Don't you know there are so many up-to-date things to think about that the ordinary wide-awake mind, such as all the seventy-niners possess, has precious little time to waste on long by-gone reminiscences. All that I ever had seem to me very much like dreams and I am ever wondering as to how they ended. One of my little daughters defined a dream as "A something that isn't so," and I fear that most of my reminiscences are of the same order. One of them begins thus: At a lecture in physics, in one of the amphitheaters in the Rogers Building by a certain Professor X, the professor was standing on a high stepladder adjusting an Atwood machine for the demonstration of a law of falling bodies when a sweet tenor voice, or perhaps a falsetto-tenor voice, belonging to another Charlie, came drifting from the rear, "Look out, Charlie, or you will fall."

(SECRETARY'S NOTE: The secretary rises to remark that he is not guilty.)

Immediately the professor didn't fall but slowly and stately descended the ladder, brushed his hands nervously, thought very hard for a moment and with a voice tearful and agitated remarked, "Gentlemen, the experiment is indefinitely postponed," and so it was. My experimental knowledge of falling bodies has been defective ever since. The unsatisfactory part of this reminiscence is that I never can remember just how it ended, like a dream it fades away into nothingness. I only hope that Charlie got *****. Why don't you put it up to him and let me know so that I may have one complete reminiscence? I should like dearly to have you make up a few reminiscences for me as you threaten to do. They would be such an improvement over the real things; they would be so complete and up to date. The more I think of it the more do I believe it would be an excellent thing, just the job for our secretary. I will swear to any thing he may produce.

Arthur E. Wilson writes as follows:

I wonder how many of the Tech fellows now do as I did in '77 and '78? Walk from Cambridge, near Central square, over the Brookline bridge to the old mill-dam road, now called Beacon street, to the Tech buildings. That old desolate road without houses, with great stretches of the river on one side and unending marshes and fens on the other, was the bleakest place in New England many a time to me when I trudged it twice a day. Whatever became of the two Japanese who were in our class? Did you ever hear anything concerning them? Both were good democrats although one, I believe, was a prince in his own land. Be sure and spell democrat with a small d.

The secretary was very much pleased with the unanimous response which he received from the members of '79 in Pittsburgh. All of them have written and their letters follow. The first from Harlow:

I have sent you several promises but your last letter shows that promises will no longer go. Your threat to invent reminiscences for the class of '79 sounds menacing.

I have been out here in Pittsburgh for more than twenty years and it is rather difficult to remember things that happened in our class a good many years back of that. We have out here, however, Bill Rea of our class. He is a very prominent man and the top of his head shines beautifully.

We agreed that each should write the other's biography for the April REVIEW but he has reported that he tried to write mine and found it unfit to print.

Rea was smoke inspector for the city for a few years and during his occupancy of the office we had beautiful smoke, now that he has retired the smoke is worse than ever.

Boyd, now and then, drops in from Fullerton, Pa. (booming the Lehigh stoker), and lunches with us. So there are but three of us out here of '79 now that our dear friend and classmate, Alden, has gone.

Rea and I like to talk of going to Boston for the Reunion in June. If we ever get there it will be a wonder, but are hoping for the best and wishing you all a joyous time.

William H. Rea here takes up his pen:

Judging from your method of applying pressure I should say you were a German. Your threat to write us up if we failed to supply copy is really what brought us out of our holes.

Harlow was all of a tremble when he communicated your threat to me and said that he had complied with your demand. Knowing him intimately as I do, I am curious as to what he wrote. Two things are certain, however; either he grossly colored his autobiography or it was not fit for publication. Professionally, he has done very well. Twelve or fifteen years ago he built several Carnegie libraries here and elsewhere, and since then has constructed a red barn and sundry pink outbuildings of unique design.

(SECRETARY'S NOTE: Probably Harlow thought the barn and buildings were colored green. I remember his making a beautiful drawing for his thesis and coloring the trees and grass red, being under the impression that he was coloring them green or possibly it may be that at that early age he was trying to paint the town red.)

As for myself, I failed to amass a fortune in the engineering line, so got out of it in 1904 and have since been devoting my time to the affairs of several associations in various manufacturing lines. For a period of about three years I was in one of the city's bureaus (for the elimination of smoke), and while I received no bouquets from my intimate friends some other ignorant citizens were charitable enough to say some results were obtained and a good start, at least, was made. Certain it is, Pittsburghers now see the sun occasionally!

Three children, two of them married, and five grandchildren complete the family circle to date—and further deponent saith not!

(SECRETARY'S NOTE: Rea has nothing on your secretary. He has three children married and seven grandchildren.)

Boyd honored me with a call not long ago and appointed me chairman of a local committee to secure attendance at the Reunion in June. I am making strenuous

efforts to have Harlow present and thus insure a representation of just fifty per cent of our local membership.

Hoping this interesting sketch may avert the calamity you threaten in your letter of the 4th inst. to Harlow, and wishing you success in your big stick campaign.

After a careful study of these letters I have been unable to find in them anything that I asked for in my letter, viz., "reminiscences of Institute life."

The following is a letter from our old friend, Sully Sargent, *basso profundo* of the class. Sully had a fine voice forty years ago and it is better today than it ever was:

You ask for reminiscences of the old days at the Tech. I fear that the few I can bring to mind will have very little interest for the class, but, as you insist, here goes. My time, when not busy at lectures or over the drawing board, was generally employed either in the Gym or at some occupation connected with music. Then again I learn, from a small diary that I kept in the winter of 1879, much time was spent in the billiard room of the Hotel Brunswick, so convenient for the boys—much time and considerable coin for my limited supply.

In the Gym and over the Gym, where Jones used to feed the boarders for \$3 per week, I can recall various feats that left a strong impression. I remember Hibbard on the horizontal bar always filled me with admiration and envy, and I distinctly recall my wonder when I saw you, O Mr. Secretary, eat stewed tomatoes and sugar, the latter completely snowing under the red of the tomatoes!

I find many entries in my little book of meetings at my room in West Cedar street to work with the class quartet: Gooding, Metcalf, Hartwell and Dunbar were the members. Mention is made of a wrestling match in the Gym between Davis and Duker, the latter winning; do you recall this? That winter *Pinafore* was very popular with amateurs, and I remember well the rehearsals and performance I took part in as the boatswain. Scovel and Frank Rollins were also in the cast. We had a very jovial time with the music and acting, and I wish I could hear it now! It must have been pretty bad. Well, Mr. Secretary, if your letter had not been so desperate, I would have hesitated before unearthing such trivial memories as these of thirty-seven years ago, and I apologize.

If the men would help the secretary as much as the lady members of the class, the secretary's position would, indeed, be an easy one. Fifty per cent of the lady members of the class have written letters. There were two ladies in the class of '79; fifty per cent would be one and the one letter follows—from Mary L. B. Reynolds:

If you are going to make up reminiscences it might be well for me to furnish you with a few facts.

You can use as many or as few as you like.

My first connection with Institute work was in the spring of 1873, when Professor Crafts gave a course of lessons in qualitative analysis in the laboratory of the Girls' High School, where I was then teaching (as Mary Capen).

A little later, two or three of us women applied for an opportunity to study at the Institute but were refused until Professor Wing and Professor Ordway offered us the use of their own desks.

After the Women's Laboratory was built I took courses in quantitative analysis, mineralogy and microscopic botany.

In 1877 I resigned my position in the Girls' High School and went to the Burnham School for Girls in Northampton, as teacher of mathematics and science.

In 1881 I married Franklin S. Reynolds of Brockton.

After his death I again took up the work of teaching in Peabody, 1897 to 1899, and in Boston Public Schools since that time.

Letters without reminiscences of Institute life have been received from Lane, Nichols, Riggs, Spicer and Waitt.

The following reminiscences from your secretary have been carefully chosen from a mass of reminiscences of different kinds.

As he remembers Tech, the first year was very easy in its work, the second year was fairly hard, the third year was very hard and the fourth year was fairly restful.

The class entered with ninety-two members and graduated twenty-three, which was a pretty thorough weeding out. Many of those, however, who dropped by the wayside are still members of the class and appear to be as full of life, to say the least, as those who graduated.

The secretary had the pleasure of walking in and out every day from Brookline during the four years he stayed at Tech, and in those days the city blocks ended at Fairfield street on Beacon street. Now the city blocks extend in almost unbroken lines to the Chestnut Hill reservoir. After leaving Fairfield street on the way to Brookline the only buildings on Beacon street until St. Mary's street was reached were the old Edwards grocery store at the milldam, so called, and a beer saloon at the fork of the roads, Beacon street and Brookline avenue and the old Brighton road.

As I have stated the first year was very easy for anybody who graduated from the Brookline High School. Of course, those who came from the English High, the Boston Latin, Noble's, Chauncy Hall School, and the Warren Scientific Academy of Woburn, not being so well prepared, found the first year more difficult. I remember our dear old French teacher, Professor Luquien, otherwise called "Lucy Ann," saying to me one day, after one of the French classes, that he knew it must be very uninteresting for me to listen to the other members of the class because I was so much farther advanced and so I need not come to any more recitations, but only needed to come to the semi-annual and final examinations. I told him that it would be a great deprivation for me to stay away from the recitations because I enjoyed hearing his beautiful French pronunciation so much. He said that if I felt that way about it I could come.

I have never been able to decide in my own mind whether this invitation on the part of the professor was a boost or a slam. Privately I think he wanted to get rid of me.

I remember with great pleasure Professor "Charlie" Otis—a fine gentleman he was. I recall the following conversation which he held one day with the class of '79:

Professor: "*Trägt man Unterhosen?*"

Pupil, with his usual fluency of reply: "*Ja, man trägt Unterhosen.*"

Professor: "*Ja, im Winter trägt man Unterhosen aber im Sommer trägt man gewöhnlich nicht Unterhosen.*"

We always considered this was quite a give away on "Charlie's" manner of dressing in summer.

The hours spent in Professor Atkinson's room were always rest-

ful and the hours spent with Professor Kneeland have certain interesting points—especially impressed upon my memory is the heavy load the old lamplighter used to carry, and Professor Lanza, small of body but big of brain—wonderful. I remember the class working out the dimensions of a beam, having given certain distances between supports and a certain load. The beam as worked out was one-sixteenth of an inch thick. The professor, intent upon the correctness of the figures, did not notice the extreme attenuation of the beam until his attention was called to it, but he stuck to it that it was right all the same.

Of course, we all enjoyed the great joy ride we had to the Fair at Philadelphia in 1876. Everything was nicely managed on the trip down as I remember it. We rode on the Joy line part of the way, which, by the way, was a good name for the trip, for it certainly was a "joy" ride, part of the way by steamer, part of the way by freight cars or platform cars. The catering arrangements certainly could not be better. I remember a free fight for some stale bread where we had to dive into a barrel to get it—and other little delicate happenings.

I have been told by one who was there that the meat for the battalion was kept in the dissecting room of the University of Pennsylvania.

Well, it was a handsome crowd of men who came out onto the University of Pennsylvania grounds with Zalinski at the head with his red feather, and, as I remember it, I didn't get more than two hours sleep any night while I was there. In the day time it was working hard to see everything at the Fair buildings; in the evening it was different. At the Fair I remember Professor Bell and his assistant, Watson, displaying for the first time the Bell telephone, and old Dom Pedro from Brazil was one of the distinguished members of the party investigating the merits of the invention.

I also remember a certain Artists' Material Display, with a rotating stand covered with tubes of oil colors, and somehow a placard which had been on a pile of circulars saying, "Please take one," was placed upon this rotating stand, and a large number of the M. I. T. representatives as they passed by said stand, being good soldiers and accustomed to obeying orders, took one of the tubes until the stand was empty.

Then there was the ice cream garden right opposite the camp where ice cream was bought by some of the boys until they could not eat any more and then they bought more and allowed it to melt while they chatted with the very pretty little German girl in attendance.

Professor Barton's reminiscences, at which I will confess I was much surprised, remind me of Fox's Variety Theatre, where assembled one beautiful warm evening several hundred representatives of M. I. T. occupying several of the front rows in the

theatre. One of these M. I. T.'s had what was known as a "fighting cut" and he occupied unfortunately for him a front seat. A song was sung by one of the fair damsels of the show and at the end of each verse, with a very languishing glance at the young gentleman with the fighting cut, she would sing, "I mean that one without any hair," all in beautiful rhyme with the rest of the verse. Happy days! ending in a grand illumination. You all remember how neatly and beautifully the camp was kept and how all the boxes and excelsior, paper and cleanings of the camp were gathered in an enormous pile at the lower end of the camp grounds. The nearest tent to this pile of combustible material was occupied by four of the nicest boys in the company, if you will let them tell it, and about one o'clock in the morning a very corpulent corporal of the guard slipped three or four pieces of inflammable material, in the form of black cakes, to one of the occupants of this tent, telling him that if that was set fire to it could not be put out; especially if it was placed in this pile of combustible material. No sooner said than done; they were slipped in and set fire to and a grand illumination followed. The corpulent corporal hastened up to the tent of the grand mogul, Zalinski, and reported the fire. Cannon crackers were set off and otherwise things were made joyful. When the lieutenant arrived on the ground he called for water, but unfortunately all the water buckets and barrels had been tipped over—such a strange and unfortunate coincidence. The little boy who started this fire, upon creeping back to bed, thought it was time to be going home, having seen enough, so he started from Philadelphia on an early train. Why Philadelphia should be called "slow" I have never been able to fathom. I certainly did not find it so.

My reminiscences with relation to Companies A and B are quite pleasant. Company A was composed, with a few exceptions, of all the handsome men in the class, of course, leaving out such men as Spicer, Miller and Little, and my recollection is that the colors were always taken by Company A, not because we tried as hard as Company B but because we just simply couldn't help it.

Many other pleasant reminiscences crowd upon my memory, but I do not want to take up too much room in the REVIEW, so will close with the final reminiscence when, upon graduation, Commencement Day, I delivered in what I thought a very finished manner my thesis upon the platform of Huntington Hall. Afterwards, a friend of mine told me that a lady who sat back of her made the following remark in relation to my thesis and its delivery: "That young man delivered his thesis as though he didn't care anything about it himself and knew that nobody else would."

But to return to the present; a special and most interesting exhibition of Philip Little's plates in black-and-white, and in color was held in December, last, at the Copley Gallery, Boston. The *Transcript* discusses the collection as follows:

Some forty-three new plates form a collection of considerable range and variety, the first collective showing of Mr. Little's work in this medium. He has drawn his subjects from Salem harbor, Gloucester, and the Down East island where he has his summer home, and has produced a very interesting and original series of prints. Several of the plates are etched directly from nature.

There are few more satisfactory works in the collection than the small marine pieces Nos. 1 and 3, "Breeze of Wind" and "Fishermen," which remind one of the spirited little marine paintings by Jules Dupré which, in some sort, resume within themselves the impression of great space and freedom and breadth. There is a distinct note of individual sentiment in the two etchings of "Derby Wharf" (16 and 18). Other exceptionally interesting examples include the "Smelt Fishermen" (20), the "Salem Waterfront" (36), and the "Lobsterman" (43).

AUTOBIOGRAPHY OF WILLIAM HENRY PICKERING

I was born February 15, 1858, in Boston, where I resided until shortly after my marriage. I was educated at private schools and at the English High School in that city, whence I went to Technology. After graduating, I studied and experimented at home for a year, and then received an appointment as assistant in physics at the Institute. I went to Colorado in the summer of 1878 to observe a total eclipse of the sun, and in 1886 went to the island of Grenada in the West Indies for the same purpose.

As a boy I had taken an interest in wet plate photography, and as an instructor at Technology established a course in that subject by the dry plate process that had then just been discovered. Photographs were taken of the eclipse in Grenada, and soon after my return I was called to the Harvard Observatory, where I advocated and received permission to carry on experiments on the photography of the stars. These turned out successfully, and I was sent on an expedition to Colorado to study the atmospheric conditions at high altitudes, in connection with the proposed establishment of an Observing Station in some elevated region or on some high mountain summit.

The highest observatory in the world at that time was the Lick, at an altitude of 4,000 feet. I took a 12-inch telescope with me, and carried it to various locations in Colorado, ending up with the summit of Pike's Peak, altitude 14,000 feet. I had always been fond of mountain climbing, and among other things ascended the Half Dome in Yosemite Valley by means of a rope. For 900 feet the ascent had to be made hand over hand, supporting a considerable portion of my weight at the same time on my feet. The ascent was continuous, as there were no intermediate ledges on which one could rest. In fact, the only ledges were inverted! Comparatively few living persons have been on the summit, since the rope was removed many years ago.

The atmospheric conditions in Colorado were not found to be favorable, so a second trip was made to California. My third total eclipse was observed in the northern portion of that state, and photographs taken of it with a 13-inch telescope, the largest aperture that has yet been used for this purpose. The instrument was then taken to southern California, and mounted on Mt. Wilson, where the present Solar Observatory is located. This was in 1889. The instrument was kept there for a year, and many photographs taken with it. Excellent conditions were found, which presumably led to the establishment there at a later date of the present extensive astronomical equipment.

Harvard wished its mountain observing station to be located south of the equator, however, in order to photograph the southern stars. Few mountainous regions occur in southern latitudes. The most accessible one was selected for a preliminary trial, that in Peru and Chile. An exploring expedition was sent down there and reported favorably, I accordingly followed with a more extensive equipment, and erected the permanent station at Arequipa, Peru, in 1891. The observatory is located in the bottom of an open valley among the Andes, at an altitude of 8,000 feet. Within ten miles is located the active but quiescent volcano of El Misti, altitude 19,300 feet. It was a constant temptation to my mountaineering instincts, and an ascent of it was finally planned and carried out. A meteorological station

was also established upon Chachani, at an altitude of 16,600 feet, which was visited once every ten days. This station was located 1,000 feet higher than the summit of Mont Blanc, and was therefore for several years the highest in the world. On my way home through the Straits of Magellan I stopped over in Chile, and observed my fourth total eclipse of the sun, and secured the first photographs ever taken of the reversing layer.

The next year, 1894, finding Dr. Lowell interested in Mars, through my observations made on that body in 1892 at Arequipa, I went out to Flagstaff, Arizona, and put up the first telescope and dome for the Lowell Observatory. Observations were made there by me for about six months on that planet, and also on the satellites of Jupiter, whose forms were shown to be elliptical.

For several years I was busily occupied in Cambridge, but in 1899 made a visit to the island of Jamaica with a portable 5-inch telescope, to study the atmospheric conditions favorable to astronomical observation, and also to select a site for a possible future observing station.

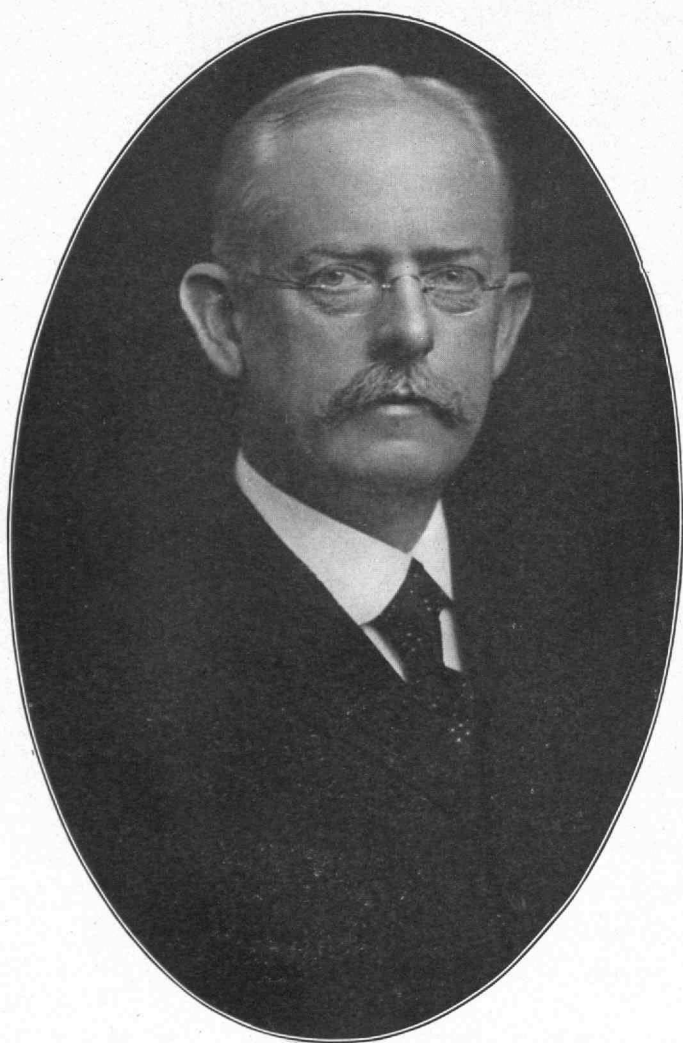
In 1900 I led an expedition to Georgia to observe my fifth total eclipse of the sun. It was hoped to settle the question of the existence of the supposed intra-mercurial planet at that time by photography, by means of a series of lenses of very long focus. No such planet was found, and later photographs employing the same method, render it almost certain that no such body exists.

In 1901 I again visited Jamaica and erected a 12-inch telescope of 135-feet focus, and secured a large number of photographs of the moon, which were later published in the *Harvard Annals*, and formed the first complete photographic lunar atlas. In 1904 I returned to California to make some studies on the question of the existence of lunar vegetation, and unexpectedly observed what seems to have been an eruption of one of the active craters upon the moon, a small but permanent change in a particularly well-known area having been produced.

I visited the Hawaiian Islands in 1905, and ascended the four chief volcanoes, in order to study their resemblances to those found on the moon. An almost complete analogy was recognized, and a report published with illustrations taken both from the moon and from the islands, in the *Memoirs* of the American Academy. A similar expedition for the same purpose was made to the Azores in 1907. There I had the pleasure of meeting some of the descendants of the Magellan whose Strait I had formerly traversed. I also by the invitation of the Portuguese government visited one of the other islands on a naval vessel, and made a descent into the crater of an extinct volcano. The neck was very narrow, only a few feet in width, and I had to be lowered by a rope some 90 feet, a considerable portion of the way being suspended in mid-air like a spider. At the bottom was found an extensive cave and a subterranean lake. In 1909 a visit was made to Alaska, with a return through the Canadian Rockies, where I indulged in a few more mountain ascents.

In 1911 I again returned to Jamaica, and established the Jamaica Astronomical Station of the Harvard College Observatory. Here I am making my home for the present, having at last found a locality where the atmospheric conditions are suitable throughout the year to astronomical research, and the climate is attractive at all seasons.

My first publication in book form was "A Walking Guide to the Mt. Washington Range" published in 1882. I have since published "The Moon," a photographic atlas, with descriptive chapters, "Lunar and Hawaiian Physical Features Compared," several volumes of the *Annals* of the Harvard College Observatory, and over two hundred magazine articles, mostly relating to astronomical matters. I am at present issuing a regular series of Reports on Mars. When the planet is nearest us they come out every month, the object being to furnish a news sheet of the constantly recurring changes upon the surface of that planet. This is the only one of the heavenly bodies from which news is regularly published, and the only one whose surface shows constant and conspicuous change, other than that due to clouds in its atmosphere. Report No. 15 has just been issued. In connection with these reports an international association of observers of Mars has been founded, with members of the organization located in all longitudes around the world. By this means every portion of the planet's surface is kept under constant



WILLIAM W. MACFARLANE, '79

surveillance, which had not previously been done. Monthly reports and drawings are received from the members, and many of the drawings of identical regions have been published, for purposes of comparison. By this combined effort it is hoped ere long to materially increase our knowledge of some of the things that are now happening upon our sister world.

In 1899 Phoebe, the ninth satellite of Saturn, was discovered, and it was shown why it and certain other satellites since found revolved in their orbits in the opposite direction to all the other members of the solar system. The great outer spiral nebula of Orion was discovered by photography, and it was shown later where certain planets should be looked for that are believed to revolve beyond the orbit of Neptune.

I have a wife and two children. I belong to the following societies and clubs: I am an associate of the Royal Astronomical Society of England, a corresponding member of the Royal Astronomical Society of Canada, an honorary member of the Astronomical Society of Mexico, a chevalier of the Order of Saint James of Portugal, a fellow of the American Academy of Arts and Sciences, a past president of the Appalachian Mountain Club, a member of the American Astronomical Society, and of the Boston Mathematical and Physical Society, a fellow of the Harvard Travelers' Club, and member of the Authors' Club of New York.

WILLIAM W. MACFARLANE

Notice was sent to the different members of the class, by the secretary, of the death of William W. Macfarlane who was very popular with the different members of the class. His picture is reproduced in this issue of the REVIEW with the following article which was published, at the time of his death, in a Chester, Pa., newspaper:

William W. Macfarlane, one of the best known and highly esteemed residents of Chester, general manager of the American Dyewood Company and a prominent member of the Chester Hospital Board of Managers, died September 14 at his residence, Twentieth street, near Providence avenue, following an illness extending over a period of ten months. He was in his fifty-sixth year.

Undergoing an operation ten months ago, Mr. Macfarlane temporarily recovered, but suffered a relapse. He was removed to the Johns Hopkins Hospital, Baltimore, Md., where another operation was performed and while everything in medical treatment was done to prolong his life the good effect was only temporary. He returned to this city the latter part of last January and was under the constant care of his wife, a former superintendent at the Chester Hospital, and the best physicians available.

During the past few weeks it was plainly evident that his death was only a matter of time and while his wife and the attending physician worked diligently he gradually sank and death relieved him of his sufferings shortly after 9 o'clock.

Besides his wife, née Miss Mary L. Harper, he is survived by a daughter, Miss Louise Macfarlane.

Mr. Macfarlane was a member of the Penn Club, of this city, Union League, of Philadelphia, Franklin Institute, of Philadelphia, Society of Chemical Industries, England, second vice-president

of the American Dyewood Company, and a graduate of the Massachusetts Institute of Technology. In politics he was a Republican.

He was born in Woburn, Mass., in 1859. His first wife was Miss Susie Rogers, of the same place, who died in this city about seven years ago. Mr. Macfarlane came to this city about twenty-five years ago and since that time was an active citizen and was greatly interested in the affairs of the city.

During this time the plant of the American Dyewood Company, of which he was superintendent and general manager, more than doubled its capacity and also took over the business formerly done at Boston, Mass., and New York City. It was under his able leadership that the growth of the plant occurred.

At the time of the consolidation of the New York and Boston Dyewood Companies he was elected second vice-president of the American Dyewood Company, and filled that position until death ensued.

Outside of his activities at the Chester plant, Mr. Macfarlane rebuilt the plant now operated by the company at Jamaica. He also visited plants in France and England in the year of 1908.

Previous to coming here he was in charge of a sugar works in Canada, and, subsequent to that, he was engaged as manager of the Quaker City Dye Works.

He had great ability as an executive and was well equipped on the technical side by education and experience. In public life he was active in all movements designed to improve conditions and especially helpful in connection with the management of the Chester Hospital, where he was influential in bringing about important changes making for greater efficiency. He was one of the most active members of the board of managers and his suggestions were always accepted as advisable. Mr. Macfarlane was chairman of the building and grounds committee and directed many important changes to the interior and exterior of the institution which will live as a monument to him.

In unknown private ways he was charitable and went to considerable trouble to disguise this fact. In his death, Chester is deprived of a highly-respected and enterprising citizen.

1880.

GEORGE H. BARTON, Sec., 80 Trowbridge Street, Cambridge, Mass.

After the "Grilling of the Class of '80" in the last number of the REVIEW it seems that it is up to the secretary to say something in reply. The secretary of '80 occupies a peculiar position. In common with twenty others he prepared at Warren Scientific Academy, Woburn, Mass., and entered the Institute with the class of '79. Later he lost a half year because of sickness and

so graduated with the class of '80, but he has always kept up his affiliations with '79.

The class of '80 originally entered with about forty members. During its entire four years at the Institute there was but little class-spirit.

Only eight members, of which the present secretary was one, graduated. No class dinner was held until graduation and no single class dinner has been held since. One of the eight graduates died within eight weeks after graduation and the seven remaining graduates have never all met together since.

The class of '79 invited '80 to join in their dinner at the first great Tech Reunion and a few accepted that invitation.

When the Association of Class Secretaries was formed the class of '80 had no organization, no president and no secretary. The present secretary was asked by the organizers of that association to meet with them as a representative of '80 and he did so. Later at the '79-'80 dinner he was officially elected secretary of '80 with William T. Miller, president. The secretary was then reimbursed for the expenses that he had so far incurred but all later expenses have so far been met by him personally.

For some time he diligently sent out requests for news and information from the members of the class but obtained almost nothing at first and finally nothing at all, so that he gave it up as useless and stopped long ago trying to rouse any interest.—Miller and Hamilton are still in Boston and are occasionally seen by the secretary who has tried in vain to get them to attend the various Institute functions.—Chase is in Colorado, as he writes, and the secretary has heard from him a few times during these many years. He was in Boston for a short time last summer but the secretary was away on a trip to Hawaii so that he did not have the pleasure of meeting him then.

The other graduates are all dead and the secretary seldom sees any of the other former members of the class.

As to class news in the REVIEW it seems plain why it does not appear. The secretary cannot get anything concerning anyone but himself, and he does not care to constantly fill the space with his own doings, as perhaps he might easily do.

But to make good this time the following is a record of his trip to Hawaii during the last summer. He left Boston on July 4 taking a party of eighteen men and women for the purpose of studying the geology of various places in America and in Hawaii. This number included himself and wife and later they were joined by his daughter in San Francisco. Of the whole number twelve went to Hawaii, the others remaining on the Pacific Coast and joining the party on its return from Hawaii and returning with it to Boston.

The first stop was made in Minneapolis where under the direction and guidance of Warren Upham, formerly of the U. S. Geological

Survey, and Mrs. Upham the party visited the Falls of Minnehaha, the Indian Mounds in St. Paul, and other points of interest. Then five days were spent in Glacier National Park where parts of the travel were in automobiles and others on horseback. Here the scenery is very grand, the glaciers very fine, and the geology extremely interesting. Next two days were spent at Mount Rainier National Park, but as it rained nearly all the time very little was seen there. Very short stops were made in Seattle, Tacoma, and Portland. Passing over the famous Shasta Route we had very fine views of Mount Shasta but did not stop. At San Francisco two days were spent in visiting the Exposition and in seeing the city. After a six days' delightful sail on the quiet waters of the Pacific the party landed at Honolulu where several days were spent in visiting various points of interest on the Island of Oahu. Very fine auto roads have been constructed over large parts of the island and rides were taken around the famous Diamond Head, an extinct volcano, now fortified by the U. S. Government so that the public is not allowed to ascend or to enter the crater as formerly; then to the beautiful Kapiolan Park, to the Aquarium, and thence to the Moanalua Gardens where tea was served. A longer ride was taken over the famous "Pali" and around the east side and north end of the island and then back over the high plateau of the center of the island between the two ranges of mountains. On the way stops were made at one of the great pineapple canning factories and at one of the large sugar mills, the members of the party being shown the entire process of preparing and canning the fruit in the one place and the complete process of making sugar, from the arrival of the cane from the fields to the shipping of the sugar in bags in the other. Lunch was eaten at the beautiful Haleiva Hotel, the summer resort at the north end of the island.

Going via an inter-island steamer to Maui, the second largest island, one night was spent at Lahaina and then autos took the party to Wailuku.

In a visit to Haleakala, the largest extinct crater in the world, twenty-three miles in circumference and 2,500 feet deep, with highest point 10,030 feet above the sea, autos were taken to within eight miles of the summit and thence horseback the remaining distance. Night was passed in a rest house at the edge of the crater. Fine views of a sunset and sunrise above the clouds were had. Another trip on this island was into the Iao Valley said by Mark Twain to be the most beautiful valley in the world.

Thence going via another inter-island steamer to Hawaii, the largest island, the party landed at Hilo where autos were taken over a fine road to the Akaka Falls, 500 feet high, and sixteen miles north of Hilo, thence back to Hilo and without stopping to the Crater Hotel within two miles of the famous Volcano of

Kilauea. Formerly a trip from Hilo to the volcano had to be made on horseback over a very poor bridle trail, taking from early morning till late in the evening; today it is made in a couple of hours.

After a lunch at the hotel and a rest till 4 o'clock, autos took the party directly down into the crater and over its floor to within a few rods of the so-called "burning lake," *i.e.*, the pit in the crater floor in which is the active molten lava. After watching the boiling, bubbling, tumultuous fiery liquid of molten rock till long after dark the party returned to the hotel.

Several trips were made into the crater both on foot and in autos and also to the "Six Craters," to the "Tree Moulds," and to the "Koa Forest."

While at the Crater Hotel Professor Jaggar was a guest of the party at a dinner during the evening.

On the return to Hilo a journey of one day was made over the Hilo Railway which runs along the coast northward for about fifty miles. Through the courtesy of Lorrin Thurston, the vice-president and general manager, an observation car was furnished the party accompanied by one of the officials of the road. Over fifty large gulches, some 2,000 feet deep, were crossed on steel arches. On several of the largest arches the train was stopped that a good view might be obtained while much information was furnished by the official.

Returning to Honolulu visits were made to the Bishop Museum, to some of the schools, and various other features of the city. One long tramp and climb was made under the guidance of Professor W. A. Bryan to the summit of Mount Olympus, the second highest peak of the Pali Range, 2,800 feet above the sea. From this peak a very fine view of both sides of the island is obtained.

One of the most interesting occasions for the secretary personally was the dinner given him by the Technology Club of Hawaii. Many of the members were away at that season of the year but there were just a dozen present. Jacob F. Brown, '76, an old friend of the secretary is president. One other member was a former student of the secretary while all the others were strangers to him. However, Tech men are always friends wherever met and a most pleasant evening was passed. Many questions concerning the new Technology were asked and answered and then Tech reminiscences were indulged in till a late hour.

After another very pleasant sail over the Pacific the party landed at San Francisco, spent two more days there, then three days at Los Angeles, Pasadena and San Diego, with one night at Santa Barbara. Various rides were taken at these places and the Exposition visited at San Diego.

Then two days were spent at the Grand Canyon of the Colorado in Arizona. A descent on mule back was made into the Canyon

by the Bright Angel Trail on one of the few cool days at this season of the year. There is perhaps no more awe-inspiring journey in America than this descent of more than a mile in depth toward the interior of the earth and at last to stand at the edge of the river that has cut this immense chasm out of sandstone and granite.

From the Grand Canyon no stop was made till the party reached Boston on September 5, exactly on time to the minute after a journey of some 15,000 miles in all with no mishap of any kind during that journey.

Reminiscences of '80

One of the most amusing occurrences in connection with our class took place just before graduation. The class of '79 had inaugurated the custom of having public exercises due to the wishes of President Rogers. Our class having only eight members left felt that each one of so small a number would be by far too conspicuous on the platform to suit our modest tastes. Consequently we voted not to have any public exercises and a "Committee of Three," of which I was one, was appointed to call upon President Rogers to notify him of our action and the reasons therefor. At our request President Rogers made an appointment for the committee to meet him at his home on Marlborough street. When we arrived there we were met with a most gracious reception and soon placed at ease by his cordial manner and his showing us many of the interesting things in his collections. But whenever any of us attempted to bring up the subject for which we had come he always had some especially interesting thing to show or to tell and we finally left without having had a chance to even mention the object of our interview.

The committee reported at the next meeting of the class and one may easily suppose our report was received with much derision and sarcasm. So much was this the case that I indignantly moved "That the class should as a committee of the whole have an interview with the President and explain our position." This motion was carried and such an interview was arranged for, this time to take place in old Room 13. Again President Rogers met us very cordially, began at once to tell us very pleasant stories of some of his experiences in his first starting as a teacher and then as a field worker, etc., and these were kept up in such a way that again no mention was made of the object of the interview and it came to an end. This also brought to an end our attempt to avoid a public graduation for which I presume that we are now all glad.

Of the eight that sat on the platform at graduation there are now only four left, Chase, Hamilton, Miller, and myself. It was the last time that we were ever all together. Clark left the platform before the exercises finished to start for Idaho where



F. W. CLARK, '80

he had accepted a position. Some years later he returned to Tech to accept a position as assistant professor in the mining department and was with us for a short time. Then he returned to his home in Chicago where he became a prominent business man till his death a few weeks ago. Small died within eight weeks after graduation, although in good health at that function. Brown spent some time in Mexico City as a civil engineer and then returned home. Being always of a very religious nature he finally became a clergyman. He died a few years ago. Millen never kept up communication with the class after leaving Boston, and I only accidentally heard of his death a few years ago.

FREDERICK W. CLARK

Frederick William Clark, of Chicago, died after a very brief illness, February 5, 1916.

Mr. Clark was the son of Jonathan Clark, a builder, who was one of the pioneers of Chicago. That city was a very small place when he first came there and he witnessed a very large part of its wonderful growth. His son came to the Institute and took the mining course in the class of 1880. His first work was in the Western country, I think at the Tremont Mine of Montana, where he encountered one of those curious contradictions which have so often happened to our mining men after leaving Technology. He always said when he was at the school that whatever else he did he would never have anything to do with a dry stamp crushing silver mill. This mill he took charge of with the mine in Montana was a dry stamp crushing silver mill. He had a great deal of good experience there, and a little later he came to help me in the mining department, I think first as instructor, and then as assistant professor.

During his stay at Technology he showed wonderful vigor and energy in his work in the mining department and did a very substantial amount of work in helping organize the laboratory and the department. In the summer school which was held at Eustis, Canada, he was virtually in charge of the school because my health was so poor that I was scarcely more than a figurehead, as I was at that time recovering from typhoid fever. A great deal of the value to the students of that summer school was due to Mr. Clark.

At the end of that year he made up his mind that he would prefer to spend his life in more active work than in teaching, and he took up his father's business and carried it forward and greatly enlarged the business, bringing in his mining ideas to help him in his building operations. I remember one instance where he was building in a suburb, he laid a track from the nearest railroad when the frost was in the ground, out to the building he was about to erect. Later in the spring when the frost came out of the ground, and all the neighborhood was a quagmire, he was

able to haul his lumber, bricks, and lime direct to his building, while all the other builders in the neighborhood had heavy wagons stalled in the deep mud. He built many large and important business buildings both in Chicago and elsewhere. Among them were the Art Institute of Chicago, Ellicott Square Building, of Buffalo, part of the Charlestown Navy Yard, and the Beacon Hill Building of Boston. In addition, he found time to do a great deal of traveling. That and golf were his hobbies.

Two years ago when I was retired from the position as head of the mining department Mr. Clark did a very lovely thing for me. He gave me an invitation to come to his Florida orange grove, and spend some months there at his expense, riding bicycle, or studying orange blights, as I preferred. This was a thoroughly genuine act of friendship on his part, as any benefit he might have received from it would have been small and might have been *nil*.

Mr. Clark has always been strongly interested in Technology in general, and in the mining department in particular, and he will be much missed by all his friends.

He married Phebe F. Dyer of Chicago, who, with two daughters and a son, survives him.

ROBERT H. RICHARDS, '68.

1881.

FRANK E. CAME, *Sec.*, Metcalfe Apartments, Westmount, Quebec, P. Q.

FRANK H. BRIGGS, *Asst. Sec.*, 146 Summer Street, Boston, Mass.

Frank West Rollins was born in Concord, N. H., February 24, 1860, and died October 27, 1915, of valvular disease of the heart. He was the son of United States Senator Edward H. Rollins and of Ellen Elizabeth West, member of an old Concord family, whose memory Governor Rollins has perpetuated in the beautiful West Garden, occupying the site, on North Main street in Concord, of her ancestral home, the house in which he was born.

He received his preparatory education in the schools of Concord and under the private tutorship of Professor Moses Woolson. He then attended the Massachusetts Institute of Technology as a member of the class of 1881. Subsequently he studied law at Harvard and with the late John Y. Mugridge of Concord, and was admitted to the New Hampshire Bar September 1, 1882. In 1893 Dartmouth College conferred upon him the honorary degree of master of arts. His interest in educational affairs continued through life and he gave valuable service as a member of the boards of trustees of the Massachusetts Institute of Technology and of St. Paul's School at Concord, being, also, treasurer of the latter institution.

Drawn towards a business, rather than a professional life, Mr.



FRANK WEST ROLLINS, '81

Rollins joined his elder brother in the firm of E. H. Rollins & Sons, which has become an investment banking and bond house of national scope and standing. At the time of his death, he was its president. He was a director of the Great Western Power Company and a member of the Boston Chamber of Commerce and had been vice-president of the Investment Bankers' Association of America and president of the New England Business Federation.

It was almost inevitable that he should enter early upon political life and leadership; and, because of his father's prestige and his own popularity and wide acquaintance, he was not obliged to serve the usual apprenticeship. Upon his first appearance as a candidate, he was elected, as a Republican, to the New Hampshire State Senate of 1895, and, subsequently, was given the honor, unprecedented for one so young and untried, of the presidency of that body. He was one of the leaders of his State and of New England for "sound money" in 1896, and made a notable speech as the head of a delegation which visited Presidential Candidate McKinley, at his Ohio home, in that year.

In November, 1898, Mr. Rollins was elected governor of New Hampshire by one of the largest majorities in the history of the state.

His first official proclamation, that for Fast Day, was a review and a rebuke of rural degeneracy and general religious decay which gave the state a needed and useful mental and moral shock.

To this good work, he added, later, the establishment of the Old Home Week festival, now a part of the New Hampshire statutes, and fixed with equal permanence in the hearts of the people; while its central idea has spread from coast to coast and even beyond the ocean.

Having risen in the state militia to the rank of assistant adjutant-general, Governor Rollins had a practical knowledge of the needs of the National Guard, so that one of the early acts of his administration was the reorganization of the state's soldiery into a more compact and useful form.

The cause of highway improvement in New Hampshire had in him one of its first and most staunch friends and upon the formation of the New Hampshire Good Roads League he became its president. As governor, he was the first to advocate the building of the three main trunk lines of highway, which in later years became an accomplished fact, and of great economic value to the state.

He thus saw and helped to realize the development of the state's valuable summer resort possibilities.

But his greatest service to New Hampshire was his leadership of the movement, now national in its scope, for the preservation of natural resources. As the founder, and, until his death, the president of the Society for the Protection of New Hampshire

Forests, Governor Rollins stood sponsor for a sentiment in action which now is culminating in the state and national ownership of most of the White Mountains; in other forest reservations at strategic points here and there through the state; in an excellent system of protection against forest fires; and, best of all, in an aroused and enlightened public sentiment as to forestry.

Outside of his business connections and his public career, Governor Rollins was a man of many interests which broadened and enriched his life.

He had a strong leaning towards the sea, and was a member of the Eastern Yacht Club of Marblehead. His summer residence was by the ocean, at York Harbor, Maine, although he occasionally visited his camp on Moosehead Lake.

He was an enthusiast in out of doors life—camping, riding, driving, motoring and the like. He was the first president of the Beaver Meadow Golf Club and a member of the Snowshoe Club of Concord; belonged to the Intervale Country Club at Manchester, N. H., and similar clubs at York and elsewhere.

Governor Rollins had an unusual taste for books; devoted to reading and writing them. Much of the too little leisure in his busy life he gave to authorship and among his published works are: "The Ring in the Cliff," "The Twin Hussars," "Break o' Day Tales," "The Lady of the Violets," "Old Home Week Addresses," "Guide to New Hampshire," and "What a Young Man Can Do." He also contributed extensively to magazines and was one of the authors of the "History of Concord" (1903).

A facile and interesting speaker, he was in constant demand to respond to after-dinner toasts, as an orator of occasion and as a lecturer upon the various topics with which his name and achievements were prominently connected.

Mr. Rollins loved good fellowship. A widely traveled man, meeting wherever he went the people best worth knowing, he was himself a delightful companion, and equally in his element as host or guest. He was a Thirty-Second Degree Mason and a Knight Templar, and a member of many clubs, including, besides those previously mentioned, the Union, Exchange and Authors of Boston, the Wonolancet of Concord, being the first president of the latter organization.

Governor Rollins was an Episcopalian and a devoted churchman, a prominent lay delegate in diocesan and general conventions, and a trustee of the Church Orphans' Home and of the Diocesan School for Girls in Concord, of the Brantwood Camp at Greenfield, N. H., and of the Church Settlement Society.

Mr. Rollins married Katherine W. Pecker of Concord, December 6, 1882. Their son, Douglas, was born October 25, 1886. Besides his wife and son, he is survived by his two brothers, Edward W. Rollins and Montgomery Rollins, of Dover, N. H., and by his sister, Mrs. Henry Robinson of Concord, N. H.

From the countless tributes which his death called forth may be chosen these few words, written by one who had known Governor Rollins long and well: "Strong of purpose, fine of feeling, generous and noble, how much he did to make the world a better place in which to live!"

HARLAN C. PEARSON.

Reunion Notes

The following have already "signed up" for the class dinner at the University Club, Monday, June 12, at 6 p. m.:

Tippy Winslow, Godfrey Cabot, Lieut. Henry Sweet, Allan Sargent, Col. George Wallace, Bill Revere, Hans Allen, Ira Abbott, Major Briggs, Dave Goddard, Oscar Munyan, Charlie Ayers, Frank Came, Harry Cutler, Harry Stearns, Jim Lund, Dr. Duff, Charles Codman, Ned Lewis, Col. Fred Walsh.

Those who "have hopes" are Dave Bissell, Bill Rosing and Al. Rosenheim.

Let's hear from some more P.D.Q.

H. H. Cutler's new address is now 111 St. Paul St., Brookline, Mass.

The following fellows who were in the School of Mechanic Arts, or specials, from 1876-1881, inclusive, have stated that they wish to be considered "one of us": Newton M. Anderson, Principal Asheville School, Asheville, N. C.—Solomon F. Cushman, Monson, Mass.—Dr. Ira J. Prouty, Keene, N. H.—David W. French, Hackensack Water Company, Weehawken, N. J.—Charles F. Codman, Boston, Mass.—Walter E. Frost, Boston, Mass.—A. Jarratt Lewis, Boston, Mass.—James S. Rogers, Detroit, Mich.—C. H. Stephenson, Lynn, Mass.

1882.

WALTER B. SNOW, *Sec.*, 136 Federal Street, Boston, Mass.

The thirty-fourth annual class dinner and get-together of the class occurred on Thursday, February 3. In the afternoon half a dozen of the men took a trip through the new buildings. In the evening Darrow, French, Gooding, Hall, Jenkins, Munroe, Snow, Strickland, Walker and Warren sat around the table at the Boston City Club.

The March issue of the *Tech Quad* issued by '81, '82, '83 and '84 to jointly stir up class interest in the Reunion will be gotten out by '82.

At the annual meeting of the National Association of Wool Manufacturers held in Boston in February, Col. John P. Wood was re-elected president. By an unfortunate conflict of dates he just missed attending the class dinner. He recently appeared as the representative of the textile interests before the special Congressional Committee.

George F. Chapman, who was in Boston at the time of the alumni dinner, came pretty near surprising his classmates, few if any of whom have seen him since 1879. He subsequently wrote the secretary as follows:

Learning of the alumni dinner the day before it came off I telephoned for a place at the '82 table. Had it not been for a miserable blunder on my part in making connections would have been with you on that occasion.

The old M. I. T. days and associations have a very warm place in my heart, and I regret that I have not been able to keep in closer touch with my class and the great work the Institute is doing.

I thank you for your kind thought and suggestion and hope to be able at no distant day to meet with the boys of '82.

—Mansfield who was unable to attend the class dinner wrote from Erie, Pa., as follows:

The years that have gone by so quickly have brought many changes, but one of the greatest is the passing of "Rogers." When I am fortunate enough to come to Boston again, Boylston street will certainly look strange to me with no Technology buildings. No doubt many of you recall how we used to tramp over the marshes and waste land which is now the Back Bay. Were it not so far away I could be with you for our annual class dinner, but D. V., I shall be there next June when I expect there will be great doings at the old M. I. T.

John Ross had this to say regarding his absence from the dinner:

My wife tells me that I am from home 101 per cent. of my time. You will agree with her when I write that I cannot be on duty next Thursday.

I will try to do better at the June Reunion. Please remember that I owe Rufus Herrick a drink and arrange our dinner at a place where I can pay my debts.

The address of David McClure is reported as University Club, San Francisco, Cal.

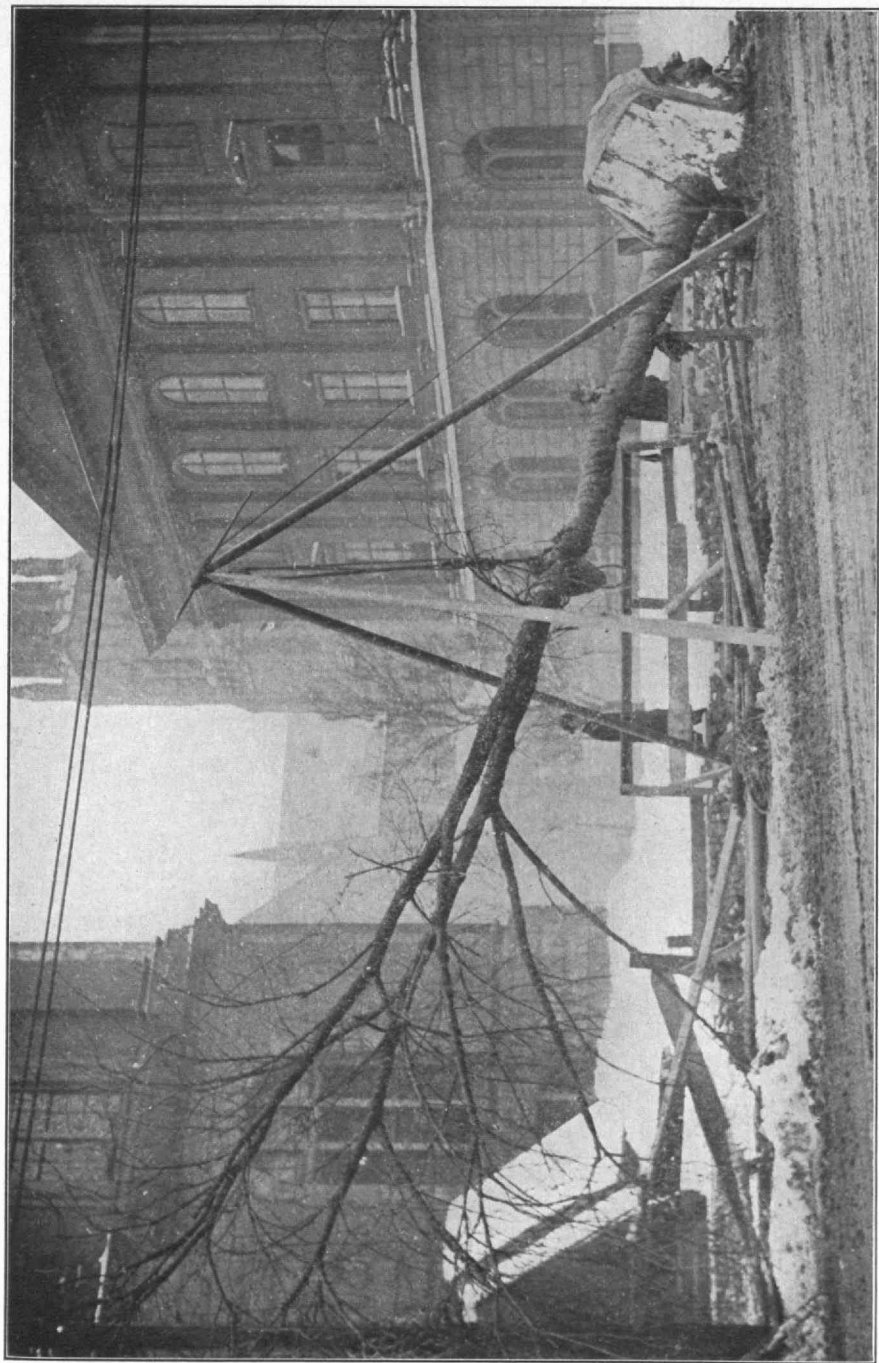
FREDERICK B. COCHRAN

Frederick B. Cochran died on March 2 at his apartments in the Hotel Belleclaire, New York City. He was born in Boston fifty-four years ago, the son of the late Asa Folsom Cochran and Caroline R. Cochran of Boston and New Orleans. He attended Chauncy Hall School and entered M. I. T. with '82. For many years he lived in New York where he was a member of the New York Stock Exchange. In addition to his brokerage interests, he worked at mechanical problems and invented several appliances, among the more recent of which was a vacuum cleaner. He was a member of the New York Athletic Association and the New York Yacht Club. Mr. Cochran leaves a wife, who was Miss Florence Hill, a daughter of William H. Hill, for many years the Paris representative of an American concern, and two daughters.

1884.

HARRY W. TYLER, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

Du Pont's numerous friends have naturally been much interested of late in newspaper announcements of his candidacy for the Republican presidential nomination as a representative of the business



'85 CLASS TREE ON ITS WAY TO CAMBRIDGE

MASSACHUSETTS INSTITUTE
OF TECHNOLOGY

Boston, April 5 1880

My dear Mr. Weston

I am afraid I cannot
say that, for an antislavery. I wish.

Convincing, I agree & encourage the
Class of 1885, then have occasion
or a step, in perpetuity, the
head of fund - whereas that they
have funds -

But I can say that
the lawship belongs to the class for
all the purposes for which they

can possibly use it; and that we shall
be glad to have some members, or
members, of the Class, or some
descendants, or descendants, of some
members, or members of the Class,
stand on - or near - it, all the
time, to the end of time.

I trust you will have a right
privilege to pay time at your
pleasure; and that you will
never give more to the Trust,
with fresh devotion.

Yours very
truly
Charles A. Walker,

men. While the announcements cannot be regarded as authoritative, the seriousness with which they are discussed in leading newspapers indicates notable appreciation of his standing among public men.

Mrs. Alice Park of California, widow of Dean W. Park, is spending some weeks in Boston on her return from the Ford Peace tour. Mrs. Park insists that the peace pilgrimage was by no means a failure and that public lack of respect for it is due mainly to gross misrepresentation on the part of some of the newspaper men who took advantage of Mr. Ford's generosity.

1885.

I. W. LITCHFIELD, Sec., Mass. Inst. of Tech., Boston, Mass.

The '85 class tree which has adorned the sidewalk in front of the bursar's office, was moved to the new site in Cambridge, February 17, and was given a position of honor at the corner of Massachusetts avenue and the Esplanade. The expenses connected with the moving of the tree were kindly undertaken by Charles W. Eaton. In this enterprise the class had the hearty coöperation of the Park Board as well as of the street commissioner who did everything possible to assist. It was necessary to pass a bill through the Council to move the tree. It is perhaps fourteen inches in diameter at the butt, and has grown well considering its environment. Unfortunately the sidewalk was honeycombed with pipes of every description and it was impossible to get a very large ball of earth around the roots. It was moved when the earth about it was frozen, and in its new location will be carefully watered and tended in the hope that it will live and flourish.

The history of the class tree is very interesting. When the class of '85 was at the Institute, a tree, which was opposite the office occupied then by the President, General Walker, died, and some of the loyal spirits of the class conceived the idea of planting a class tree there. Accordingly a letter was written to President Walker asking for permission to call the little place in the sidewalk where the dead tree stood, the campus of the class of '85 and plant a class tree there. President Walker's reply which is in the possession of Arthur Little is reproduced below.

BOSTON, April 5, 1890.

I am afraid I cannot say that *pro auctoritate mihi commissa*, I give and convey to the class of 1885, their heirs, executors and assigns, in perpetuity the tract of land whereon this class tree stands.

I can say that the land shall belong to the class for all the purposes for which they can possibly use it; and that we shall be glad to have some member, or members, of the class, or some descendant, or descendants, of some member, or members, of the class, standing on or near it, all the time, to the end of time.

I trust you will have a right friendly and jolly time at your reunion; and that you will renew your vows to the Tech with fresh devotion.

Sincerely yours,

(Signed) FRANCIS A. WALKER.

The committee in charge of the class tree exercises interviewed the city forester, Mr. Dougue, who died but a few years ago. He was most enthusiastic and presented the class with an American elm which he said was the best tree to plant there.

In order to open the ground to plant the tree it became necessary to secure a permit from the Bureau of Incumbrances. The hole was dug and all the preparations made, and an elaborate program run off. The members of the class formed in a circle on the sidewalk about the tree, each one smoking a long church-warden pipe. Now it transpires that the permit to open the ground gave us permission to stop traffic on the street for a certain period. The policeman on the beat had been shown this authority, and when the real dedication exercises took place, saw-horses were thrown across the street, and the subsidized policeman was instructed to see that the solemnity of the occasion was not disturbed. As a matter of fact the class never moved off the sidewalk. After the dedication the '85 class tree song was sung, and then the enraged teamsters and car drivers were allowed to pursue their way.

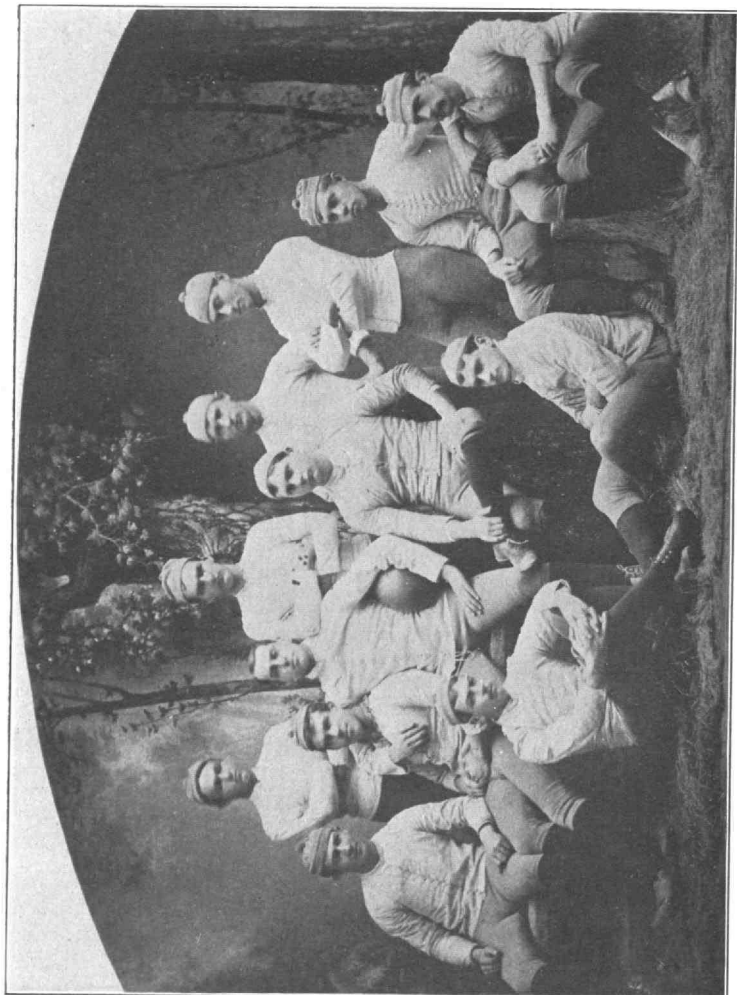
It is planned to rededicate the tree on the new site at the time of the Reunion. Suggestion has been made that the class take luncheon informally together on Monday, June 12, and then march over to the new site and hold proper exercises about the tree. Full details will be published later.

The annual dinner of the class occurs on Saturday evening, April 22, the Saturday before Easter. It is hoped that as many members of the class as possible will attend this dinner as all the arrangements for the class participation in the Reunion are to be made at that time. The president of the class this year is George Steele.

The old class banners, which were used at the Reunion in 1909, are faded and unsuitable for further use. It has been decided by the Reunion Committee to ask each class to provide its own banner for the coming Reunion. The chairman of the committee on decorations suggests certain uniformities with the statement that a good silk banner can be had for somewhere between twenty-five and fifty dollars. The class of '85 will therefore appear with a new banner at Nantasket June 13.

By the way, the class of '85 is due for a stunt at Nantasket on Tuesday, June 13, and we want to present something at that time that will be of an unusual and interesting character. Will the members of the class kindly send the secretary any suggestions that may be of assistance.

Heywood Cochran's son intends to enter the Institute next fall. Mr. and Mrs. Cochran are also arranging to come on to the Reunion in June.—Bob Richardson is still out West in the interests of his company, the Electric Bond and Share Company of New York.—Alex. McKim has just been elected president of the



1
VARSITY FOOTBALL TEAM OF 1881

From left to right: Standing—Frank M. Haines, Coleman du Pont, F. O. Harriman, D. W. Park
 Sitting—G. F. Steele, Frank Cheney, H. F. Baldwin, E. C. Hillyer, Unknown
 Sitting on Ground—F. B. Richards, H. G. Pratt

recently organized State Engineer Reserves which will represent the entire State of New York. Each group of nine or more members in cities and towns of the state will be considered a unit.—The secretary shook hands this winter with W. H. Eddy for the first time in over thirty years. Eddy is in Fall River and attended a meeting of the Technology Club of Fall River in February. He is going to attend the Reunion probably June 12 and 13.—A special invitation has been sent to William A. ("Chippy") Chapman, "First Lieutenant and Adjutant," whose address is now 205 Park avenue, Raton, New Mexico. It is hoped that he will be here to assist General Spalding in marshaling the '85 forces and assisting them to capture all the honors as usual.—The secretary has been remiss in failing to note the marriage of Miss Alice Packard of Fall River to Raymond Edson Nute, son of Joe Nute, who is manager of the Fall River Gas Works Company in that city. The wedding occurred on the 8th of November, 1915. Mr. Nute, Jr., attended the Institute with the class of '14.—*Science* of February 25, contains a long paper read before the Biological Club of Yale University December 3, 1915, describing the life and scientific attainments of Theodor Boveri, who married Marcella I. O'Grady, '85. His death occurred October 15, 1915, at Würzburg, Bavaria. He was a pioneer and leader in the fields of cytology and experimental zoölogy. When thirty years old he was called from the University of Munich to Würzburg to succeed Semper in the chair of zoölogy and comparative anatomy. His reputation as an investigator soon attracted scores of students, among them Miss O'Grady, then connected with Vassar College, whom he afterwards married and who was an efficient assistant in all his later scientific work. He is survived by his wife and one daughter.—On the occasion of the dinner of the New York alumni, held January 29 at the Savoy, Ed Dewson got in touch with every possible '85 attendant and secured the presence of Richards, Lufkin, Martin, Mullins, Bates, McKim, Lyon and Litchfield, and these, with Ed, gave the class a good delegation. With us at the table was W. W. Bosworth, '89, the architect of the new Institute buildings, and E. H. Blashfield, '69, the celebrated mural painter of New York. Alex. McKim led the cheering in a masterful manner.—Tracy Lyon has moved from Detroit and is now living in Brooklyn, N. Y., at 12 Pineapple street.—Billy Spalding has just sent a card announcing the opening of a shop at 282 Dartmouth street, Boston. This enterprise is to be carried on by him in conjunction with Mr. Dexter E. Spalding, his son, and Mr. Arthur S. Vernay of New York City.

As a contribution of the reminiscence number Bert Pratt sends us a cut of the M. I. T. football team of 1881, which is reproduced on another page. Here is his letter:

I am sending you under another cover a "reminiscence," the M. I. T. Football Team of 1881. When you see this picture you will note the angelic expressions,

prophetic, doubtless, of the future. Certainly one of the subjects has become in fact a big and good angel to the Institute, and he is now mentioned for president of the United States. We were then, and I suppose still are, about the same age as the Institute itself. There was this difference, however, that the Institute represented work, and we represented the worked, or thought we did, until we learned better. Think how we must have hated grinding mathematics, to prefer grinding our noses on the gravel bottoms of the made land of the Back Bay, yet we thought we enjoyed it. Anyway, it is a joy to think of it now and to remember the view from the bottom of the pit out to the streets above, lined with generous rooters, whose silhouettes against the sky can never be forgotten.

As the class news in the REVIEW goes to press word comes of the sudden death of Florence Ingalls Ames, widow of Oakes Ames, who died at her home in Dedham, March 27. She is survived by one daughter, Amelia C. Ames, and two sons, Oakes Ingalls Ames and Charles E. Ames.

1887.

E. G. THOMAS, *Sec.*, 1911 South 4th Street, Springfield, Ill.

The annual dinner of '87 was held at the Engineers Club on the evening of February 25 and was attended by Mulliken, Very, Solomon, Cobb, Hussey, Bryant, Cameron, Lane, W. H. Brainerd and Brett, while Taintor came in late in the evening. Previous to the discussion of '87's part in the Reunion celebration, the class fund committee reported that there was on hand a balance of \$1,652.51 and that there had been no calls for assistance during the past year. The following committee was appointed to take entire charge of Reunion matters for the class: T. W. Sprague, chairman; Mulliken, H. D. Sears, F. A. Merrill and N. T. Very. The sentiment of the men present was that while every effort was to be made to have '87 represented fully at the Reunion, our usual five-year outing should be held next year. Taintor appeared in the uniform of a private in the "business men's battalion," of which he is an enthusiastic member and gave, in an interesting way, his views on the military needs of the country.

Noyes & Jackson, the firm of brokers of which Sturges is a member, have moved to larger quarters at 218 So. La Salle street, Chicago.

The death of Charles M. Cabot on September 15, 1915, has just been brought to the secretary's notice.

1888.

WILLIAM G. SNOW, *Sec.*, 24 Milk Street, Boston, Mass.

Of course you are coming to the big Reunion in June; local members of '88 will give you a good time and make it a memorable occasion. The secretary will be glad to answer any inquiries.

One '88 man succeeded another in the presidency of the Alumni Association, Henry J. Horn stepping out and Charles A. Stone stepping in.

In response to the suggestion that the April number be a Reminiscence number, one of our classmates sent the following:

Scene: Dear Old "Johnnie" Runkle's classroom in differential calculus. Time: Any spring morning, A. D. 1887, at about 9.15 p. m. Dramatis Personae: The Professor and "The Class"; the latter, all quietly busy at the black-boards, struggling with problems in "Diff"; the former surreptitiously polishing that "other eye."

Act I: Enter the Hero—Mr. B——y, abloom with the latest in spring attire, light derby, new suit, tie, top-coat on arm, new gloves and cane!—all the last word! Commotion, with shuffling and other demonstrations, on the part of "The Class"; followed by the careful deposition of the various "impedimenta" and the careful adjustment of the Hero to his job at the black-board,—the more difficult problems, now all appropriated by "The Class."

Act II: Interval of two days. Scene, *same*; actors, *same*; particularly, also, *same act* on the part of the Hero, with all its carefully adjusted details. Renewed and increased interest on the part of "The Class"—this time "that eye" adjusted. The professor, a little more interested.

Act III: Two days later: Exact reproduction of Act II.

Act IV: Two days later: Exact reproduction of Act III.

Act V: Two days later: This act starts off as in Acts I, II, III, and IV; but at the critical moment—the Hero, just within the door, "that eye" adjusted—the following moving speech by the professor, accompanied by a most hospitable gesture of welcome: "Gentlemen: the late Mr. B——y!" Slight embarrassment of the Hero, with a somewhat more hurried deposition of the impedimenta; sniggles, from "The Class"; curtain!

S. C., "88."

John G. Faxon is clerk of the Ways and Means Committee, Massachusetts legislature.

Twenty-one members of the class of '88 were present at the alumni dinner.

Sanford E. Thompson recently presented a paper before the American Concrete Institute at Philadelphia, on "The Design and Construction of the Massachusetts Institute of Technology Buildings," a paper of unusual interest to Tech men.

1889.

WALTER H. KILHAM, *Sec.*, 9 Park Street, Boston, Mass.

Mauran has been elected president of the American Institute of Architects, being the first member of '89 to receive this honor. An ovation was accorded to him by 150 of his confreres in St. Louis on February 10. Mauran has been active in the efforts of the American Institute of Architects to conserve the beauty of the national capital and to protect it against encroachment.

Hyde has been seriously ill for several months. The class will be glad to see the following letter which the secretary has received from him and to know that he is now well on the road to recovery.

Thank you cordially for yours of the 3d. I have been ill on and off for several months and seriously so during January and February. Am on the road to health now, I think, but it will be some weeks yet before I am myself.

It has always touched me deeply that the class continues to regard me as a near relative in spite of my short and inglorious career as an actual student with '89.

Again thanking you and wishing you and every member of the class every success and happiness.

F. A. Hills is now engaged as superintendent of construction on the new U. S. post office building at Greenfield, Mass.—Franklin W. Hobbs made the address at the closing exercises of the evening classes of Pratt Institute, March 24.

—The *New York Evening Post* of March 17 contains the following:

George M. Basford has resigned as chief engineer of the railroad department of Joseph T. Ryerson & Son, to accept the presidency of the newly formed Locomotive Feed Water Heater Company, with offices at 30 Church street, New York. The new company will develop for locomotive use the film heater designed and patented by Luther D. Lovekin, chief engineer of the New York Shipbuilding Company.

Basford, who has been identified with the development of the locomotive in this country, has an international reputation for his pioneer work in developing apprenticeship courses for mechanics in railway shops and in getting railroad officials generally interested in adopting merit systems for selecting, training, and promoting employees. He is the father of the Railway Signal Association.

Graduating from the Institute of Technology in 1889, Basford entered the Charlestown shops of the Boston & Maine, afterwards serving in the motive-power departments of the Burlington, the Union Pacific, and the St. Paul. He left the road last named to become superintendent of construction of the Johnson Railway Signal Company, afterwards serving with the Union Switch & Signal Company and the Hall Signal Company. In 1905 he accepted a position as assistant to the president of the American Locomotive Company, leaving there to go with the Ryerson Company.

In 1895 Mr. Basford left signal work to become mechanical department editor of the *Railway and Engineering Review*, and in 1897 he was made editor of the *American Engineering and Railway Journal*. In 1903, in recognition of the constructive work that had been done in the profession generally, fifty-eight prominent railway and railway supply men presented Mr. Basford with a volume of personal letters expressing their appreciation of him, together with a substantial check to pay the expenses of an extended trip abroad to study foreign conditions.

In commenting editorially on the appointment of Basford as the president of the Locomotive Feed Water Heater Company, the *Railway Review* says:

"It would be difficult to inspire in the railway mechanical fraternity a greater degree of confidence in a newly introduced device than is to be enjoyed by this feed water heating apparatus by virtue of Mr. Basford's position in the promoting company and his endorsement of the device to the motive power officials of this country, all of whom are his friends either through personal acquaintanceship or through the many beneficial influences he has wielded in his many sided connection with railway affairs."

Besides being successfully applied to steam locomotives, the device patented by Lovekin has found a range of application in marine and stationary practice.

These address changes should be noted: Howard B. Emery, 6 Brown Terrace, Jamaica Plain, Mass.—G. C. Kaufman, Hotel Oakland, Oakland, Cal.

1890.

GEORGE L. GILMORE, *Sec.*, Lexington, Mass.

You have received No. 4 of the *Tea Kettle*, issued in March, and we are patiently waiting replies from you as to whether we are to have you with us at the Reunion next June. It is very essential that we should hear from you immediately as it is necessary to make accommodations for our different gatherings. We certainly hope that a large number of you will be present. At least forty

or fifty should be on deck to show their interest in the class of Ninety. Having postponed our twenty-fifth reunion until this year, in order to combine it with the big Alumni Gathering, we think the majority of you are interested enough to try to be present, but we must again impress upon you the importance of notifying your secretary at once.

We have booked accommodations for a class dinner at the City Club Monday night, June 12, where most of the other classes are to gather. The price of this dinner is \$2 per plate, and you can see that, with the large number that will be present, it is very essential that we give the exact report as to the number of our men that will be with us. In our last issue of the *Tea Kettle* we sent out nearly two hundred notices, and we only received replies from about fifty, and many of those, of course, were unsatisfactory. We must again impress upon you the importance of paying prompt attention to these notices, and letting us hear from you at once if you have not already written.

The final issue of the *Tea Kettle* before the Reunion will appear early in May, barring accidents, and in that will be final details for our gathering, but replies from you before then, in any form, or letters for publication in same, will be most appreciated.

We have a number of committees working on different details, but it is up to you individually to do your little share. It seems almost as if the men from the greatest distance from the Hub are taking the most interest. Now you fellows in and around Boston should at least show sufficient interest to get busy and let us hear from you. We can guarantee you a glorious week, and one that, if you fail to attend, you will regret it all your lives when you hear about it. Now fellows, for heaven's sake get on to your job, and reply to the notices sent to you at once.—Frank M. Greenlaw's residence is now 34 Bull street, Newport, R. I.—C. H. Alden's, Jr., address is now 927 Henry Bldg., Seattle, Wash.—Fred Swanton has started a Technology Quintet Orchestra among the members of the Washington Technology Club, and at the December meeting the orchestra made its first public appearance. We believe Fred was a member of Tee-Square Quartet.—Arthur W. Ayer's address is now 216 So. Ashland avenue, La Grange, Ill.—E. D. Garfield is now at 339 Pennsylvania avenue, N. W., Washington, D. C.—In January Mayor Curley of Boston removed a great many of the old employees from the different departments. Among them Clarence G. Norris of our class was removed from the Public Works Department, where he had been the assistant engineer in the sewer service since 1897.—At a tea given January 22 at the Phillips Brooks House in Cambridge, as a university tea, Prof. and Mrs. W. Z. Ripley were among those in the receiving line.—C. W. Sherman read a paper on January 12 in the New England Waters Association Meeting prepared in conjunction with W. S. Johnson, '89, and Henry A. Simonds on "Municipal Water Works

Financing in Massachusetts as Affected by Recent Legislation." They argue that some of the recent restrictions were unjust, and have produced hardships, and have had a bill introduced in the legislature to amend the laws against which they are protesting.—At the annual banquet of the Albion Chamber of Commerce, February 8, at which over one hundred were present, our classmate, Mayor Schuyler Hazard, presided. The speech of the evening was by former Congressman Hon. William M. Calder, on "National Preparedness."—J. L. Batchelder with Mrs. Batchelder started for the south early in March to be gone several weeks.—The last of February Dr. W. Z. Ripley delivered a lecture at Vassar College on "Minimum Wage," and in his remarks he stated that \$8.50 per week was a minimum wage under which any woman should work. We always knew that Billy had a weakness for the fair sex, and it is evident that he is trying to make himself more solid with them than ever. However, he neglected to tell how the employer is to get the necessary \$8.50 to pay the women who may be in his employment. Perhaps at our gathering next June he may give us some advice that will be of great assistance to the employer to meet these minimum wage requirements. Below is the newspaper account of Billy's visit to Vassar:

Vassar College students are discussing with much interest a statement made before them by Prof. William Zebena Ripley of Harvard that the least a woman can live on maintaining decency and health is \$8.50 per week.

"We in Massachusetts are in the thick of a fight in order that woman can live alone, supporting herself and maintaining her respectability," said Professor Ripley in his lecture tonight. "We aim by the Massachusetts Minimum Wage Commission to lift the economical and industrial status of women by reverting to the law. This commission has found from investigations and careful calculations that \$8.50 per week is the minimum wage that any woman should receive."

He said men had fixed wages since the Middle Ages, and urged Vassar to take steps in the work of standardizing the wages of women, and declared the time was past when women would be content to work and accept whatever payment they could get.

At the alumni reunion at the Copley Plaza in Boston, Saturday evening, January 8, the following members of the class of Ninety were present: Bartlett, Burley, DeWolf, Ellis, Gilmore, Kendall, Packard, Rogers, Royce, Sherman, Spaulding, Wason.

During the evening a telegram of congratulation was received from J. K. Noyes, and also announcing the sudden death of our classmate, S. F. Jacques.

The class of Ninety has been further honored by the election of Pierre S. du Pont of our class to life membership of the Tech Corporation.

The following extract is taken from an article which appeared in the *American Magazine* of February, 1916, in regard to Mr. du Pont and with it was a picture of him as he looks today.

Pierre Samuel du Pont, only forty-three or forty-four years old, steady, solid, modest, was content to be actual president of the du Pont Powder Company for

years with no higher title than treasurer. Probably he has profited more by the war than any other individual in this country.

The du Ponts are young, and there are a host of them. Two generations are in the business today, the older barely middle-aged, the younger hardly more than youthful. In old, picturesque, conservative Wilmington they have long controlled the banks, trust companies, utilities, two of the newspapers, and a hotel big enough for London, to say nothing of surrounding country estates, game preserves and fancy breeding farms.

For absolute ability to size up, appreciate, and cash in upon the European war the du Ponts have no peers. Alone among big munition makers, they have been ahead in their deliveries at a time when such speed might mean life or death to certain European empires. At least one of their sixty-eight plants is turning out more than half a million pounds a day of high explosives.

Years ago, the du Ponts were wise enough to offer stock to their employees. They allowed their assistants, all the way from vice-presidents to day laborers, to subscribe for the stock, and also gave it to them as bonuses for work well done. One man earning a salary of \$3,000 a year is said to have stock worth \$140,000. More than half of the stock of the various du Pont concerns is owned in Wilmington, and with the bonus system expanded to an almost unbelievable extent since the war, the prosperity of that staid old town is now, like that of Pittsburgh, in the boom times when the great steel mergers were being formed.

Inevitably the du Ponts begin to loom up in industries other than their own. Wilmington is but a half-hour's ride from Philadelphia, and the du Ponts long ago entrenched themselves in the directorates of the Quaker City's great national banks. Five of their members have gone on the directorate of the General Motors Company, probably the largest and most important automobile concern in the country after Ford. Naturally, an affiliation has been effected with the Remington Arms Company, and rumor has it strong that the du Ponts have been buying heavily into the Baldwin Locomotive Works, whose great new plant is across the river from the largest of the du Pont dynamite works. Dye works, chemical works and denatured alcohol factories—these will come next, it is said. T. Coleman du Pont is now the sole owner of the Equitable Life Assurance Society, with its half billion of assets; and the family have bought extensively into at least two large New York banks and trust companies.

—A special meeting of the Pacific Northwest Society of Engineers was held in Seattle March 14, to listen to a talk, entitled "The Engineering, the Architectural and the Artistic Problems Met with in the Designing and Building of the Panama Exposition at San Francisco, with their Solution into an Harmonious Whole," by Charles H. Alden, F. A. I. A. The notice of the meeting was worded as follows:

Mr. Alden was connected with the work of building the Exposition Buildings, etc., as the head of the Specification Department in the Division of Works, a department that coördinated the work of the engineer, the architect and the artist, in way of an harmonious working of the plans and drawings of these three classes of the profession and the preparations of the necessary specifications in order to bring about the best results of the various ideas presented for making the exposition buildings of world wide fame.

Coördination of action between the engineers, the architects and the artists is without question a most desirable thing to accomplish for the good of all three professions and the result of such coördination as worked out at San Francisco should prove of deep interest to all of us here in Seattle.

Charles Hayden left in March for a protracted trip through South America with D. C. Jackling on the latter's yacht *Cyprus*. The primary object is to inspect some tin mines in Bolivia which Hayden, Stone & Co., have under option and which they have had

engineers examining for the past six months. Were all of the options exercised the combined output would constitute about 80 per cent. of the Bolivian production of tin and about 25 per cent. of the world's production.

An interesting article, some of which we quote below, appeared in the *Binghamton Press* of February 5, discussing the long life and usefulness of the Noyes Comb Company, of which J. K. Noyes is the president. It is of especial interest to note the length of time many of the employees have been with the concern, some of them for more than forty years.

The Noyes Comb Company was organized in Massachusetts more than one hundred and fifty years ago. It is one of the eight oldest industrial concerns in the country, there being only three older. As representatives of one of the eight manufacturing concerns more than one hundred years old, the members of Noyes & Co., were invited to a large banquet given in Philadelphia last fall.

Many industries have come and gone since the ancestors of the present generation of the Noyes family brought their business from Newark, N. J., to this city in 1860. But this has remained through all the years to give employment to the men in families, even in some cases, unto the third generation, to bring prosperity to its proprietors, and to add to the industrial and social life of Binghamton.

S. FOSTER JACQUES.

S. Foster Jacques, assistant city engineer of Binghamton, died in the Johnson City Hospital at 6 o'clock January 9, as the result of a fractured skull which he sustained at 3 o'clock in the afternoon, when he was thrown from his motorcycle in front of T. B. Crary's residence in Main street. Mr. Jacques did not regain consciousness after the accident.

Mr. Jacques was an expert engineer, excelling in sewer work. He was 50 years of age and gained his early education in the Massachusetts Institution of Technology. He came to Binghamton about ten years ago and took charge of the Lestershire Sewer System which that village was installing at that time. As soon as that work was done he entered the employ of the city under City Engineer S. M. Baird. This was about nine years ago. Since that time, because of his competency, the various officers at the head of the engineering department have seen fit to reappoint him assistant each year. Previous to coming to Binghamton Mr. Jacques saw service with some of the best known consulting engineers about Boston. He served in the City Engineering Department in Worcester, Mass., where he was employed for four years. While there and in Brockton he was engaged in some of the early pioneer work on sanitary sewage disposal.

Following this he engaged in private practice in Dover, N. H., for two years and a half. He also worked in Tennessee for a year and a half. He was a member of the Boston Society of Engineers, of the Binghamton Engineering Society, of Malta Commandery of Masons and also a member of the First Congregational church.

Mr. Jacques is survived by his wife Abbie P. Jacques; one

daughter, Mildred N. Jacques, of this city; one brother and one sister of Newburyport, Mass.

1891.

H. C. FORBES, *Sec.*, 88 Broad Street, Boston, Mass.
FRED A. WILSON, *Asst. Sec.*, Nahant, Mass.

Howland has been working for the last few years upon an absolute color scheme. He has finally reduced color relationship to mathematical exactness, and by the geometry of three dimensions has given a definite location in space to every possible color. A short description of his method follows.

For many centuries men have been studying the relationship of pigment colors, endeavoring to find mathematical laws governing their combination. It was found that the combination of the pigments themselves was not a reliable method, owing to impurities, differences of atomic weight, etc.

In the early centuries, Ptolemy, and later, Sir Isaac Newton and Professor Clerk Maxwell used the method of combining colors by spinning them together on a rapidly revolving shaft, the last named using discs which could be combined in any desired ratio. The present work has been carried on along this line, but with the following modifications:

A photometer box has been invented, by which it is possible to combine an absolute black with the above method, making it possible to increase the range of the work greatly and permitting such accuracy that all colors may now be charted exactly upon a universal color chart (itself absolutely without color) where every point means a definite *hue* and *strength* and a number placed beside the point fixes the *luminosity* of that particular color.

This means that the three properties of color, hue, strength, and luminosity, have been completely isolated from one another on a single chart consisting of the horizontal projection of all possible colors.

On this universal diagram, hue is indicated by angular distance from a given point on a circumference, the center of which represents the neutral axis of all color combinations making gray.

Strength is indicated by the radial distance out from the central point, N (neutral axis), and means the power that any color has to neutralize its opposite, or complementary, color. In other words, a color 50 units' distance from neutral would have twice the neutralizing effect upon a complementary color, than would the color at a point 25 units away upon the same complementary color and but half the effect of one at 100 units' distance.

Luminosity means the percentage of white light reflected from a color, regardless of its hue or strength, where 100 per cent. is the amount of white light reflected by the standard used for comparison.

Inasmuch as the projection of any points in space upon a horizontal plane, bear the same ratio to points between them as do the points along a line in space between the original points, it becomes immediately possible to make accurate calculations in color with the greatest ease, using ratios taken from the projected plan of all colors (the horizontal chart) as a basis, and figuring luminosities from the white light of each component color used in the combination.

The above mentioned "comparative color photometer" is an instrument invented for this very purpose of making such combinations, so that they may be actually seen and proved with a very great degree of accuracy under proper lighting conditions.

It is possible, for instance, to figure a percentage combination of two or more colors, using such component colors as have already been located on the chart, to make a certain resultant color and again to figure another entirely different combination of component colors which will produce the same resultant color of

the identical hue, strength and luminosity. These two sets of component colors may then be placed in the photometer at the same time, spun under exactly similar lighting conditions, and will match so perfectly that the eye can see no difference.

By having a set of discs and sectors, already prepared, of about a half dozen of the strongest colors available in pigments, it is then possible to produce practically all of the weaker colors used in the arts and sciences, and it is always possible to locate correctly a stronger color that may be found later, after which it, too, may be used as a "working" color for producing others, of lesser strength.

Very strong colored pigments may be held in the dry state indefinitely without appreciable fading if they are kept away from light under perfect conditions. Moreover, they may be, at any time in the future, made to adhere to a card sector or disc, by means of a perfectly colorless medium, so that one can, ten, twenty, or more years from now, produce identically the same combinations of colors as may be calculated at present. This, then, offers a method of standardizing color that has never been used before.

Any color may be either matched or located upon the chart by means of standard working sectors and discs, and ever afterwards produced by means of the same colors upon similar discs. Any such standard once set, may be used repeatedly to indicate fading or change of the original.

Again, since it is possible by means of this same style of equipment, to produce similar resultant colors at any part of the world, and to indicate an exact color by three sets of numbers only, signifying hue, strength, and luminosity, it is equally possible to telegraph or cable a color to any civilized portion of the globe with the assurance that the identical color would be immediately known and matched. The possibilities of such a system are almost unlimited commercially and educationally.

Now, boys, this is just a little confidential talk with You about next June's Reunion. Of course we know you're coming back for it—if you have to go half way around the world—we can assure you you won't have to travel further than that—if you're still on earth. If gone beyond somewhere—huh?—yes somewhere—you may not see this anyway. You have already told your office boy (or your boss if you have one—perhaps your wife) that you are going to be in Boston on June 12, 13, and 14. But what about '91—your old class? '91 is twenty-five years old. '91 has a chance to shine. In the current number of the REVIEW, Ike asked for notes about public or prominent service—wanted notes on such written into class news—shucks! When we sent him the register of '91 with a paragraph on each he went to New York and got over it—New York is a great place to recover in, even to recover an empty pocket. He said 'twas too long—so, not to be partial we told him we'd leave it all out and print it ourselves. Garrison is doing it.

But see here—we were talking about money, or should have been. You will get a chance to blow in up to ten or twelve dollars (if you see everything) for the events of these three great June days. But besides this '91 wants to celebrate. Celebrations cost money—but a little from each man makes quite a sum—yes, quite a sum! What do you say to two cents a week for the short time since we graduated? We want stunts, souvenirs, banners, programs and some things as yet only mentioned in a whisper. And they all will help you enjoy your trip to Boston. You can't spend so small an amount in any other way and get

so much fun with it—and that's efficiency—getting your money's worth. We don't care how much you give—single dollars will be acceptable—but five dollars makes a check worth writing—while ten dollars will get a note of thanks from the treasurer. Send something and send it now. We're going to celebrate. Go right over to your desk and write the check now. Send it to anyone east of the Mississippi—will get it all right—although there are a couple of addresses at the top of this important communication. Wake up!

Charlie Garrison is in tears and tears his hair—he's nearly bald—why in the name of the sacred beaver don't you send him that class book information? You confounded old slow Esquimaux, what's the matter—have you hibernated like the beaver himself—or the ground-hog? The ground-hog is combing his whiskers—there wasn't any seen on Candlemas Day—and all the hogs on earth aren't ground-hogs—wake up, this is your station, change cars, send back that information now! You're stealing Charlie's nerve, patience and time; you're robbing yourself and your class of sincere pleasure and satisfaction; you're more dishonest than an up-to-date railroad director.

We want a little information and a little money NOW—we don't care about your coming around next June and saying, "By Jove, I'd have liked to have helped on this more—you fellows did finely." The man that says that then will need to wear his steel shirt. Come across now! Get out of your holes, woodchucks; Spring is coming! You're coming back to Tech to see the sights and all the people—President Wilson says "Prepare or be sorry"; Teddy says "Fear God and get ready."

DO IT NOW !!!

The big Tech Pageant for Tuesday evening, June 13, will be the biggest and best of its kind ever seen around here—or probably in America. Its design and development are in the hands of a committee and largely done (so far as artistry goes) by Mr. Ralph Adams Cram—and this is a guarantee of its high quality. It will cost like sixty—but some mysterious man (Mr. Smith?) appears to be willing it should be done right.

Charlie Garrison looks prosperous in his new offices on Bedford street whither the present scribe was towed on February 11—"Them Never sink Garments Sure do look it!"

At last Leland—remember that tall chap who was inseparable from Libby?—has come out of his trench and writes from Frisco—but not to your secretary; oh! no—he wouldn't do a thing like that! He is of Leland & Haley at 58 Sutter street, Frisco, and is a consulting engineer who seems to have done good heating work for a couple of the big buildings at the Panama-Pacific Exposition. But we thought California had a warm climate. Why so much heat—or is this talk about climate just hot air, thus increasing the demand for the means of production. Leland will tell us about this in his letter to Garrison.

We hear from a rather circuitous source from Roberts, '91. Roberts doesn't write to us—the secretary is not a member of his family—as he should be. Roberts is coming back next June—he doesn't say so, but of course he is. Everybody is. He is chief engineer of the Inter-County River Improvement at Tacoma, Wash., and has been in charge of a large project for controlling the freshet waters of the Payallup and White Rivers. These streams have done much damage at times (we have heard of whiskey doing damage, but why water?). To curb this, yielding better land values, proper irrigation and some power is involving an expenditure of several million dollars. The work of our classmate has been highly commended by United States Government experts. Hurrah for Roberts, '91! He certainly is one of us. The report of the United States Engineering experts on this sort of thing says the project is going on economically—another feather for '91—economy as great as is consistent with proper quality. But what about this river—Payallup—does this lessen the financial drain in other directions? We confess to ignorance, but why does anything which will pay all up need to be controlled? Perhaps the answer is that your secretary has never been west of Boston, and knows Tacoma only as the name of a famous cracker.

We are all sorry to learn of the death of Major F. W. Fuger, whom we all remember. The following is from the *Detroit News Tribune*.

Major Fuger retired from active service two years ago, on account of ill health. He had served in the army twenty years. Shortly after graduating from the Institute of Technology he entered the service and received a commission with the Thirtieth United States Infantry in 1892. He led his regiment during most of the engagement at the battle of San Juan Hill in the Spanish-American War. He also saw active service at Santiago.

Following the war Major Fuger was stationed in the Philippine Islands and served there three years and saw considerable active fighting during the Aguinaldo insurrection. He came to Michigan and served as military instructor at Michigan Agricultural College at Lansing for three years.

Major Fuger came of a military family. His father was the late Col. Frederick Fuger of the artillery service. He has a brother, Capt. Stanley Fuger, stationed in the Philippines, and a sister is the wife of Capt. Joseph E. Cusack, of the United States Cavalry. Another sister is the wife of Maj. D. M. King of the Maj. King Post at Rock Island.

Surviving is a widow and four children—Marie, Theodore, Pierre and Frederick.

Our classmate died on November 26, 1915, at Grosse Pointe Farms, Michigan.

1892.

W. A. JOHNSTON, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

C. H. CHASE, *Asst. Sec.*, Tufts College, Mass.

Leonard Metcalf of Boston, who has been engaged in valuation work on the Pacific Coast for some time, gave a lecture on "Engineering Valuation" in the Mining Building of the University of

California on February 23.—The following clipping taken from the *Boston Herald* of February 2, will be of interest to '92 men:

Miss Virginia Sargent Poor, daughter of Mr. and Mrs. Clarence Henry Poor, was married at noon yesterday to George Henry May, son of Mrs. William May. The ceremony was performed in the presence of the families, at Christ Church, Cambridge, by the Rev. G. Winthrop Sargent of South Hamilton, an uncle of the bride, and the Rev. Prescott Evarts, rector of the church.

The bride was attended by her sisters, Misses Adelaide and Mary Poor. William May, a brother of the groom, was best man, and C. Erskine Clement and Henry Clarence Poor, Jr., were ushers. Following the ceremony a wedding breakfast was served at the home of the bride's parents, 58 Highland street, Cambridge.

Mr. May was graduated from the Massachusetts Institute of Technology in 1892. He is a member of several Boston and New York clubs. After a trip South Mr. and Mrs. May will make their home at Ponakin Farm, Lexington. They will be at home after May 15.

About twenty of the men living in the vicinity of Boston met at a class luncheon at the Boston City Club, March 16, to discuss plans for the Reunion. A class stunt was adopted and it was voted that the class, in common with the other classes, would provide a class banner to be used at that time. It was agreed that Ingraham be assigned the job of providing a suitable design.

It looks now as though the class would be well represented at the Reunion. Notices will be sent out shortly asking for final replies as to your intentions.

1893.

FREDERIC H. FAY, *Sec.*, 308 Boylston Street, Boston, Mass.
GEORGE B. GLIDDEN, *Asst. Sec.*, 551 Tremont Street, Boston, Mass.

The annual dinner of the class will be held at the Boston City Club at 6 p. m. on Monday, June 12, the first day of the great Tech Reunion.

Merit and efficiency in municipal administration has been recognized in Philadelphia where, in spite of a political overturn, Carleton E. Davis has been reappointed chief of the Bureau of Water by Mayor Smith. In his four years' service under the preceding administration of Mayor Blankenburg, Davis made an enviable reputation in this position, and succeeded in bringing the work of his bureau to a high plane of efficiency. The *Philadelphia North American*, speaking of Davis' reappointment said, on December 30, 1915:

Mayor-elect Smith yesterday grabbed up one of Director Cooke's "crackerjacks."

He reappointed Carleton E. Davis as chief of the water bureau, thereby throwing a jolt into organization circles, and at the same time causing a feeling of gratification among citizens who are looking to him to keep his promise to set a high standard of efficiency in the city's service.

Davis, who received word of his retention in a telephone message from the mayor-elect in Atlantic City, is one of the most efficient bureau chiefs in the Blankenburg administration. He is not a native Philadelphian, and his four years of service drew the fire of organization agitators and spellbinders in loud cries against "imported talent."

After graduation from the Institute, Davis was engaged continuously in water supply and water power work in the New England States until 1900, when he was appointed resident engineer in charge of surveys, plans and construction of the Cedar Grove Reservoir, 8 miles of 60-inch riveted steel pipe line and 3,000 feet of pressure tunnel for Board of Water Commissioners of Newark, N. J. In 1904-'05 he was engineer of water works and sewers for the Isthmian Canal Commission at Panama, and from the latter year until 1912 he served as engineer in charge of the reservoir department of the Board of Water Supply of New York City on the Catskill Aqueduct work, relinquishing this latter position to take up his work in Philadelphia.

Davis is a member of the American Society of Civil Engineers, director of the American Water Works Association, vice-president of the New England Water Works Association, member of the Engineers Club and University Club of Philadelphia and Engineers Club of New York.—The following is taken from the *Engineering Record* of March 11, '1916:

At a conference at Brunswick, Maine, February 10, between Frederic H. Fay, of the engineering firm of Fay, Spofford & Thorndike, Boston, representing the Bath (Me.) Water District, and W. B. Getchell, engineer of the Maine Water Company, of Augusta, it was agreed that the plants, property, rights and franchises of the water company in the county of Sagadahoc and the town of Brunswick should be taken over by the Bath Water District at a price of \$539,500, with interest on this sum from January 1, 1916, at 6 per cent. The agreement is the first in Maine, and so far as known in New England, in which the award is less than the total reproduction cost of the physical plant, and it exemplifies a method of settling waterworks valuation disputes which has never before been utilized in any major water case in the state. In previous cases, where the parties have been unable to agree and have been obliged to resort to a court appraisal, the final price awarded has averaged about 1.5 times the amount of reproduction cost. By engineering arbitration the price of the system has been agreed upon within about four months of the passage of a referendum authorizing the taking of the works by the Bath Water District. Protracted legal proceedings and a court appraisal have been avoided, and a satisfactory settlement attained without the necessity of a third arbitrator. It is estimated that the actual saving to the Water District in interest charges, legal expenses, experts' fees and other outlays exceeds \$40,000. The city's trustees feel entirely satisfied with the result, and the water company has expressed itself as thoroughly gratified with the method and solution of the problem adopted.

Frederic H. Keyes is editor of Sweet's *Engineering Catalogue*, published by Sweet's Catalogue Service, Incorporated, 119 West 40th street, New York City.—F. W. Lord, of the Lord Manufacturing Co., is putting on the market a tennis tape for marking all kinds of tennis courts. It looks like a good thing, and is advertised in the REVIEW.—John I. Solomon, president of the International Pearl Fisheries Company of New York and India, has established an important industry in India, involving the application of the X-ray process to the detection of pearls in pearl bearing oysters, as recently described in the REVIEW.

Under date of January 13, Solomon writes that he had just returned to Rangoon, Burma, from his place in the Mergui

Archipelago, and that shortly he will return to the United States, arriving about May. He will, of course, be present at the Reunion.
—From *Engineering Record* of January 8:

Charles M. Spofford, consulting engineer, of Boston, and professor of civil engineering at the Massachusetts Institute of Technology, has been requested by Edward F. McSweeney, chairman of the Directors of the Port of Boston, to act with Guy C. Emerson, consulting engineer of the Boston Finance Commission, and F. W. Hodgdon, engineer for the board, as consulting engineers on the new drydock being constructed in that city.

Herbert N. Dawes sailed in March for Porto Rico to look after the interests of the Cerro-Gordo Fruit Company, of which he is president. Fruit raising is a side-issue with Dawes, and affords opportunity for attractive periodic vacations in the tropics.

As vice-president of the Nightingale & Childs Company of Boston, Dawes has secured the contract for pipe coverings, etc., at the new Institute plant in Cambridge.—Edward L. Wingate is general manager of the Boston Storage Warehouse Company, which has warehouses on both Huntington and Massachusetts avenues in the Back Bay district of Boston. Wingate was for many years superintendent of the G. W. & F. Smith Iron Company of Boston, until that firm retired from business, not long ago.—Frederic H. Fay, chairman of the committee on Municipal and Metropolitan Affairs of the Boston Chamber of Commerce, gave an address on January 21 before the Detroit Engineering Society and the Board of Commerce of Detroit, his subject being "The Boston Metropolitan District."

The following address changes have been received:—John R. Brittain, 2108 Maple Ave., Los Angeles, Cal.—John S. Codman, 123 High St., Brookline, Mass.—William R. Copeland, Sewerage Commission, City Hall, Milwaukee, Wis.—George K. Dearborn, care of The Barrett Co., 35 Wendell St., Boston, Mass.—William H. Graves, 69 Brattle St., Cambridge, Mass.—J. C. Hawley, 31 Milk St., Boston, Mass.—Charles F. Morse, Good Ground, N. Y.—Archibald Murray, Yarmouth, N. S., Can.—Walter W. Patch, 312 Union League Building, Los Angeles, Cal.—Fenwick F. Skinner, 21 Park Row, Room 302, New York City.

1895.

WINTHROP D. PARKER, *Sec.*, 12 Bosworth Street, Boston, Mass.

The annual class meeting and dinner, held at the Boston City Club on the evening of January 25 brought out the following men:—Barrows, H. K., Bourne, F. A., Churchill, P. M., Conant, Luther, Jr., Cook, J. W., Cutter, G. A., Fuller, A. D., Hayden, G. W., Loring, E. J., Newell, J. L., Parker, C. H., Parker, W. D., Richards, F. L., Rockwell, G. A., Williams, R. J., Winkley, W. H.

Immediately following the dinner, action was taken ratifying the results of the election of officers for the ensuing three years,

whereby F. C. Schmitz, 220 Fifth avenue, New York City, was elected president, succeeding E. H. Clapp; and W. D. Parker, secretary-treasurer, succeeding W. H. Winkley. An informal discussion of the activities centering about the Reunion then took place, much enthusiasm being evident, and as a result of the evening's talk, several votes were taken, summed up as follows:—

Voted:—That the committee appointed at the last meeting, composed of C. H. Parker, George W. Hayden, F. A. Bourne, J. W. Cook and W. D. Parker, be continued, C. H. Parker taking the place of G. W. Hayden as chairman, at the request of the latter; that it should have power to add to its membership as desirable, and that it coöperate with the New York Committee.

It was also voted that the class spend Friday, Saturday and Sunday, June 9, 10 and 11, at some country hotel, club or other similar resort to be decided upon by the committee, and that return postals be sent out to determine the sentiment of the class on the matter. Details later.

Another class meeting will probably be held some time in May, to report progress, stir up enthusiasm, and make such final arrangements as shall seem necessary.

The secretary has had sent to him, a few copies of the class book issued in 1905, and would be glad to send a copy to any member of the class who will ask for one.

A RECITATION IN GERMAN, M. I. T.

Instructor—Mr. M—.

Room 26, Walker—1894.

Courses VI. and VIII. '95 present.

Enter—Mr. M.

Mr. A. says, "Here."

Mr. B. "Here."

Mr. C. "Here."

Mr. M. "Now gentlemen, do not drive me wild—I have not called the roll today. Where do we begin? Mr. C. No. 1, will you translate."

Mr. C. No. 1 reads with much thought and deliberation a few lines.

Mr. M. "That is sight reading, is it not?—I thought so. I am not so stupid as I look gentlemen! The next."

Mr. E. reads rapidly and loudly a short paragraph.

Mr. M. "No! No! No! No! No!!"

Mr. E. "Well, I have forgotten what *aus druken* means."

Mr. M. "*Aus druken?* That's easy. What does *druken* mean?"

Mr. E. "To press."

Mr. M. "Yes, and what does *aus* mean?"

Mr. E. "Out."

Mr. M. "That's it, of course,—to press out."

Mr. E. "There isn't any sense in that."

Mr. M. "There's no sense in that? Indeed there is, if you don't see it, it's not my fault. To press out means to express, doesn't it?"

Mr. E. and others. "Oh—oh—!"

Mr. M. "Do you understand that? Well, go on."

Mr. E. translates as much, or rather as little, as he thinks best, and stops.

Enter Mr. A. with a camera under his arm. Takes a back seat beside Mr. K., places the camera carefully on the arm of the chair and directs it towards Mr. M., in readiness for a snap shot.

Mr. M. "The next."

Enter, Mr. C. No. 2 with a frown upon his face.

Mr. M.—looking up. "Well, I shouldn't like to meet you on a dark night."

Mr. C. No. 2. "I am sure I shouldn't like to meet you!"

Mr. M. and the boys are greatly delighted.

Mr. M. "The next."

Mr. B. reads a few words. "Will you tell me what *Getreidewagen*, if that's the way you pronounce it, means?"

Mr. M. "*Getreidewagen*? Why those are great furniture wagons that they used to have in Germany. Immense things in which you could carry all the goods of a store, and all your own household furniture from one town to another. I have seen them drawn by sixteen or eighteen horses!"

Cries of "oh—oh—do you expect us to believe that!" etc.

Mr. M. "'Tis a fact gentlemen, an absolute fact! And in these wagons the driver carried also his whole family who live in the wagon. They have two or three rooms divided off from the rest of the cart, where they have a kitchen, a bedroom, and parlor, and live there all the time whether the wagon is moving or not."

Students—"oh—oh—oh!"

Mr. M. "Undoubtedly. 'Tis a fact gentlemen, if you do not believe me you can go to Germany yourself and see them."

Mr. E. "How do they turn around?"

Mr. M. "How do your cars in a train turn around?"

Mr. E. "On a pivot."

Mr. M. "These do just the same." But finding that he is getting into deep water Mr. M. says, "Well, we must not waste time this way, if you do not believe me I can't help it. The next."

Mr. E. still thirsting for knowledge. "I should think the wind would blow them over."

Much laughter.

Mr. M. "It does sometimes. The next."

Mr. D. reads the next paragraph and asks "What did that man have his coat buttoned up so for?"

Mr. M. jumps up and says, "He is a customhouse officer but wants to be as much like an army man as possible, that is the highest ambition of men in Germany, and so he buttons himself up to the chin, so—" (throws back his head and shoulders and passes the tip of his finger from the bottom of his coat rapidly to the top).

Just then is heard a snap from Mr. A.'s camera and a universal shout arises. Mr. M. who thinks we laugh at him, is much pleased, and continues his performance a little longer. Mr. A. wishes another picture and proceeds to wind up his camera slowly, click—click—click. Shuffle—shuffle—shuffle from many feet helping to drown the noise; hem—hem—hem—from many throats with the same idea in view, while Mr. A. and Mr. K., convulsed with laughter, try to wind up the machine.

Mr. M. settles down in his chair. "The next."

Mr. H. "Will you please tell me where the verb is?"

Mr. M. "Look along two or three pages and you may find it. That reminds me of one time (click—click—click) when I was studying in Germany. One day the professor lectured and lectured and lectured and when he got through at the end of the hour he had not come to the verb (click—click—click). He went on the next day and as we had made a wager about that verb, we watched for it carefully. He lectured and lectured the second day and at the end of the hour he had not yet reached the verb (shuffle—shuffle—shuffle). And if you will believe it, it was not until the third lecture was almost over that he got to the verb!"

Students—"oh—oh—ha—ha—ha—" (click—click—click).

Mr. M. "'Tis a fact, gentlemen, undoubtedly. The lectures were on Roman Law, and it took three lectures for him to get to the verb. Well, we will go on. Mr. K., are you having a secret conspiracy over there? One day last week when you were not here, the class was very well behaved—now don't you corrupt it."

Mr. K. "I'm not doing anything."

Mr. M. "All right. The next go on."

Mr. D. reads the discussion between Karl and his father in regard to Karl's future occupation.

Mr. M. "Very well, the next."

Mr. C. No. 2. "Is that the way German children talk to their parents? If I talked so to my father—!!"

Many laughs and a ho-ho from Mr. M.

Mr. M. "You must not judge these simple peasants by yourself. Undoubtedly in the higher classes the children are very respectful to their parents."

Mr. C. No. 2 reads: "Karl stepped out into the bald spot." What sense is there in that?"

Mr. M. "What did you say, 'bald spot'? Ho—ho—ho—. Yes undoubtedly that word does mean 'bald spot' sometimes but here it means 'moonshine.' Oh Mr. C., you are the one who always finds the most ridiculous words for a translation. Bald spot—ho—ho—ho! Go on, go on—next."

Students. "Time's up! Time's up!"

Mr. M. Referring to his watch: "Oh no, gentlemen, we have five minutes more. This class always tries to cheat me out of half the time."

Students. "The time is up, truly. The other classes are going out." And the boys begin to get up and go out.

Mr. M. calls after them. "Well—all right—Take three or four pages for to-morrow."

FLORENCE WOOD EWING, '97.

1896.

CHARLES E. LOCKE, *Sec.*, Mass. Inst. of Tech., Boston, Mass.
J. ARNOLD ROCKWELL, *Asst. Sec.*, 24 Garden Street, Cambridge, Mass.

It is with much regret that the secretary records the death of Henry E. Nelson, on November 8, 1915, of typhoid fever. Nelson spent two years at the Institute, taking work in electrical engineering. He was classified with '95, but he had many friends among '96. In recent years, he had been engaged in the grocery business in West Roxbury.

Another recent death is that of James A. Dupee, which occurred at his home in Dorchester on January 13, 1916. Dupee had been ill for a long time. He was for many years in a responsible position with the Eliot National Bank. He was an extremely conscientious fellow and undertook more work than he could carry, which resulted in a nervous breakdown from which he never recovered. The death of his father, in December, 1915, which was a great shock to him, may be considered as the final cause of his death. Dupee took an active interest in class affairs as long as his health would permit. His classmates will recall him as a quiet unassuming fellow, with a pleasant smile,—a man whom everybody liked.

E. E. Mead after a long silence writes that he is now secretary of the Noble Electric Steel Company, with an office at 995 Market street, San Francisco, Cal. Mead was for a long time an officer in the revenue cutter service, but left that service about six years ago and says that he drifted around quite a bit before settling down in his present position. The work is a little different from

that in the revenue service, and he reports that in consequence, he has found it necessary to brush up considerably on his scientific knowledge, which has become quite rusty during his twenty years' work along other lines. He is making ferro-manganese out of rather low grade manganese ores, and turned out some four hundred tons in a run last summer.—Charles H. Paul having finished his work as construction engineer for the United States Reclamation Service, on the Arrowrock Dam in Idaho, has resigned from the Government forces to become one of the principal assistants to Arthur E. Morgan on the Miami Conservatory District work. Paul has been actively engaged in engineering work for twenty years. He started as pipe inspector for the Rockport Water Company, and served for short periods with the Boston sewer department and the Massachusetts State Board of Health. In 1896 he was appointed rodman for the Metropolitan Water Board, in which service he continued until 1900, attaining the grade of engineer-inspector. For the next four years he was with the Bureau of Filtration of the city of Philadelphia. He joined the Reclamation Service in 1904 as field assistant on the Lower Yellowstone Project. Paul's present address is Miami Conservancy District, Dayton, Ohio.—Charles Morris called on the secretary on February 28. He is at present paymaster on the U.S.S. *Washington*, which has been ordered to the Portsmouth (N. H.) Navy Yard. Norris gave a very interesting account of the experiences which the United States navy officers and men are having in putting things in order down in Hayti. The conditions which existed previously, when regularly recurring waves of revolution swept over the country, would be very laughable were it not for the fact that they resulted in bloodshed and general impoverishment of the country. Morris hopes to be in these parts next June so as to be on hand at the Reunion, but in his business it is almost impossible to tell one day where he will be the next.—Mr. and Mrs. Louis H. Losee, of No. 1811 Albemarle road, Brooklyn, N. Y., have announced the engagement of their daughter, Miss Olley Virginia Losee, to Mr. Theodore Inslee Jones, a graduate of the Massachusetts Institute of Technology.—Mrs. William MacHaffie announced the marriage of her daughter, Dorothy Elizabeth, to Dr. William David Coolidge, on Tuesday, February 29, 1916, at Schenectady, N. Y. At home Fridays after April 1, 36 Bedford road.—Myron L. Fuller, of the Associated Geological Engineers, testified before the Public Service Commission of Pennsylvania at Pittsburgh, late in December, on ground water problems entering into the appraisal of the properties of the Ohio Valley Water Company, along the Ohio River below Pittsburgh, in which work he was associated with Morris Knowles, '91.—Thanisch is now with the engineering staff of the Greene-Cananea Copper Company, at Cananea, Mexico. He has held various good positions with mining companies during recent years,

but unfortunately all of the companies have been short-lived. It will be unfortunate if the Mexican troubles cause a shut down of the Cananea company. If this should happen, he will have just cause for believing that his hoodoo is still on the job.—A recent article in the *Daily Fume* gives an interesting biography of Bradley Stoughton, secretary of the American Institute of Mining Engineers, written by one of his admirers:

Bradley Stoughton, whose middle name is suppressed at his own request, was born in captivity in the closing years of the last century. He was the child of honest but industrious parents and was considered during infancy to be extremely handsome, a theory to which his aged nurse still adheres. Owing to his Scotch parentage he had a gruelling youth and never wore clothes until he was five. He still abhors woollens.

Considering the profound influence which Mr. Stoughton has had upon our national development, the materials for his biography are remarkably scanty and we are driven to the conclusion that a careful censorship has been exercised upon all sources of information. We have, however, found some interesting material in Drinker's "Lives of the Miner Prophets," Peabody's "Early Settlers of Beautiful Nutley," Hassenpfeffer's "Eccentricities of Genius" and other trustworthy works of reference.

Mr. Stoughton learned the English language with difficulty, which is attributed to the fact that he was born without teeth. Nature soon supplied this deficiency and a traveling optician equipped him with those spectacles which have added so much to his reputation for wisdom. He was taken at an early age under the tutelage of Henry M. Howe and under such able instruction soon learned to write sentences which could be read in either direction without hesitation.

Mr. Stoughton entered the Massachusetts Institute of Technology at the early age of thirteen. His graduating thesis on "The Eccentricity of Nickel-Plated Skates" has been adopted as a standard work of reference by the Massachusetts State Bar Association. He was granted his degree of D. D. S. at the earnest request of his uncle, Mr. I. W. Engalls, from whom he inherits his sensitive digestion.

Mr. Stoughton early entered the field of patent litigation and anyone who has studied the admirable series of models preserved in the Smithsonian Institute has observed how the Stoughton non-refillable nursing bottle led to the meatless sausage and this, in turn, to the reversible and convertible converter which marks the apex of his inventive genius.

We can touch but briefly on his contributions to literature. His articles on "Seasonable Salads" fill many pages of the *Ladies' Home Journal*. His "Poems of Phoebe Snow" are known to every strap hanger, and his translation of the Constitution of the Mining and Metallurgical Society from original Greek has drawn tears from all who have read it.

Mr. Stoughton is a vegetarian and a futurist, and his only eccentricity is his emulation of the early bird in Central Park before sunrise.

At the annual alumni banquet at the Copley Plaza in January, eleven men gathered around the '96 table as follows: Hayward, Rutherford, Guptill, Hewett, Knight, Joe Driscoll, Jim Driscoll, W. R. Hedge, Bakenhus, Rockwell and Emerson.

Plans are going ahead for our twentieth anniversary celebration at Saybrook Point, Conn. Many replies have been received, but many men have not yet indicated to the secretary whether or not they can come. Some are coming from considerable distances, and some are coming who have not been in Boston since 1896. Present indications are that we ought to count on at least one hundred men. If you have not sent in your reply,

please do so at once as it is of the greatest importance that we know at the earliest possible date just how many must be provided for. Laws writes from Colorado that he is making his plans for an Eastern trip in June. Mort Sears, who is on the U. S. Forest Service, writes from Santa Fé, N. M., that he is temporarily assigned to the district of New Mexico and Arizona for four or five months, but he is going to take in the Tech celebration in June if all goes well.

Don't forget the dates! The class celebration at Saybrook Point begins on Thursday night, June 8, and continues until Monday, June 12. The big Reunion in Boston comes on Monday, Tuesday and Wednesday, June 12, 13 and 14. Owing to the occurrence of other conventions in Boston on these dates, hotel space is going to be at a premium and '96 men desiring hotel reservations should communicate with the secretary *at once*. It is probable that all visitors can be accommodated in rooming houses, and possibly many will prefer this to hotels. It certainly will bring them back again into the atmosphere of their student days.

Owing to the continuance of the class reunion until Monday, June 12, and the opportunity which men will have to meet one another at Saybrook, it has seemed wise for '96 not to undertake a class dinner in Boston Monday evening at 6.00 p. m., the date set by the program committee for the holding of class dinners.

Summary of replies received to date show 22 who will come to the class reunion, 36 who are in doubt but will probably come, and 25 who will not be present.

The following have definitely promised to attend:—Henry S. Baldwin, D. M. Bates, H. W. Brown, Frederic W. Fuller, Leonard P. Dickinson, John Dove, Henry G. Grush, George E. Harkness, Ben Hurd, Joseph Harrington, Joseph H. Knight, Charles E. Lawrence, C. E. Locke, Edwin D. Pingree, J. A. Rockwell, A. LeBaron Russell, Walter M. Stearns, George W. Sumner, Albert W. Thompson, H. H. Tozier, Lucius S. Tyler, H. G. Fisk.

The following have indicated that they are in doubt, but in practically every case the man has stated that he is planning to come, but does not wish to commit himself definitely at this time for fear that something may come up unexpectedly at the last minute which will keep him away. It seems almost certain that most of them will come:—Mark W. Allen, E. A. Baldwin, E. M. Bragg, David W. Beamen, W. D. Coolidge, Robert A. Davis, Joseph Driscoll, Frederick E. Field, M. L. Fuller, Gaylord C. Hall, M. Hellman, Clark Holbrook, Samuel P. Hunt, E. C. Jacobs, Minor S. Jameson, E. H. Laws, H. C. Lythgoe, E. S. Mansfield, G. E. Merryweather, Charles Morris, E. S. Northup, William L. Root, Norman F. Rutherford, Howard E. Smith, C. W. Tucker, Frank S. Tucker, Moritz Sax, J. W. Stickney, J. Lloyd Wayne, C. A. Wentworth, L. N. Whitney, F. W. Coburn, W. E. S. Deming, G. P. Hatch, C. G. Hyde, P. W. Litchfield.

Negative replies have come from the following:—Winthrop H. Chenery, Louis A. Freedman, Henry Gardner, H. W. Hayward, Francis C. Hersey, Jr., Walter E. Leland, H. Hilliard Smith, Frank G. McCann, L. K. Sager, H. K. Sears, G. F. Starbuck, F. A. Thanisch, Samuel F. Thomson, Miss Bean, Miss Daniels, Miss Dann, Miss Dexter, Miss Elliot, Miss Fitts, Miss Hamlen, Miss Kite, Miss Stone, Miss Torrey, Miss Wood, G. E. Stratton.

In this issue of the REVIEW reminiscences are considered to be a special feature. The secretary issued an appeal, but unfortunately not many men responded. The following gems have been submitted, and it is believed that what they lack in quantity will be made up in quality. Some writers requested that their names be omitted, and therefore to treat all alike no writers' names are given:

On one occasion "Charlie" Cross was quite late in appearing at a lecture to the Course VI men on dynamo electric machinery, and the class was becoming very restless when their attention was suddenly claimed by a little brown cur that had strayed into the room. Then the fun began. One of the boys wrote on a tag "I am a '96 dog, whose dog are you?" and tied it around the mongrel's neck. Then someone took the dog and put him up on the desk, where he complacently paced to and fro, not attempting to get down. At this juncture—of course,—Professor Cross appeared and took in the situation with a sweeping glance. He turned on his heel remarking, "There will be no lecture, gentlemen," and vanished. It is said that he laughed most heartily upon returning to his office.

Smith (not his real name), always had great difficulty in understanding some lecturers, and his confusion became the more pronounced, if a remark or question was aimed at him. For this reason he invariably sat near some sympathetic friend who would assist him. In alphabetical sequence his name came directly after Small, on Professor Cross' list, and from this list "Charlie" was never known to deviate, following it closely with a pencil and placing a dot after each name as he called it. On this occasion it happened that Professor Cross called Mr. Small, and asked one of those self-answering questions to which the very obvious reply was "yes" or "no," when someone interrupted by asking the Professor about a point he had previously made. The pencil had already rested on Small, so when Professor Cross looked again he said Mr. Smith, the question remaining the same. It would have been altogether proper for Small to claim the privilege of answering; but it seemed too good a chance for Smith and there was no telling what the next question would be; so Small let it pass. The suddenness of it took Smith off his feet and he could not answer, much to the amusement of his comrades, and more to the surprise of the Professor who would not pass the question further, but answered it himself.

It was my good fortune to take applied mechanics with '95. One afternoon, just as we were comfortably seated at our desks, and "Getty" looking over his glasses was saying, "Well, Gentlemen!" the strains of a hurdy-gurdy came up from the alley below, which continued beyond all endurance as the organist had been tipped off in advance, and a liberal shower of coin was falling around him at intervals.

Can I ever forget my consternation the night we were entertained at Professor Lanza's home, when, upon observing one of the ladies present receiving little or no attention, I stepped up to one of the Professors whom I knew particularly well, and told him that it was an outrage that a lady should be so neglected, and that I would happily spare her if some one would introduce me. He promptly offered to do so, saying she was his wife.

It is quite a new experience for one who is always looking ahead to stop and muse over the happenings of twenty and more years ago, but those times were so

really worth while, and they passed so quickly, that one can bring them to life again for a brief review, with a great deal of profit and pleasure. The four years of Institute life are as a vague pleasant dream to me, interspersed with a slightly discordant note here and there, but in the main, one of pleasure; although now I often wake up in the middle of the night in a cold sweat, and wonder if I shall really get my degree after all. I suppose the bright spot in my memory is the remembrance of General Walker and the influence he exerted over all he met. I remember that I idolized him as a truly great man, and when I was privileged to come into personal contact with him, I was impressed with his breadth of human feeling, and the ease with which he could drop the weighty matters which engrossed him, to confer with some one of the students, all of whom had a place in his large heart.

Another thing which always impressed me was the incompleteness of the life at Tech. We had a fine crowd of fellows, the courses were adequate, the professors and instructors were of the best, the knowledge gained could not be surpassed by any other institution, and yet the college life was woefully deficient, and I feel sorry that the new plant across the Charles does not promise much improvement.

There is one thing to which I will allude, and that is the cane rush in our freshman year—that appealed to me as nothing else had before, or has since; and the shredded shirts, lost hats, battered shins and limping gaits were but trophies of the grandeur of that occasion. Although the cane rush is a thing of the past, the fond remembrance of our freshman orgie, cannot be torn from our memory, as it served as an introduction and promise to the poor green freshman, of the glories to come—most of which never happened.

All remember Blachstein and Charlie Bernard. Some will also recall Charlie's brother Louis, and Herr von Mayer, an excitable gentleman from the Fatherland, whose stay at the Institute was lively but brief. Last, but not least, was the kindly Van Daell, who always went to the athletic games and became as excited as if he were one of the players.

Von Mayer was always in a stew.—One day he made the following announcement to the class: "If dose who are—er, not here, will gif me deir names, I vill mark dem absent." To a particularly trying section, he finally reached the point, on another day, where he remarked in some excitement, "You and—you, and—you is all —fools."

Probably many of us have forgotten the French that Charlie Bernard taught us, but we can never forget his scent of attar of roses, and how he kept his eyes on the fair co-eds.

Billy Anderson was never a good student in German, and always insisted on pronouncing *die* in the English way, which invariably brought out the remark by Blachstein, "Ah, Mr. An'erson, never say die, sir!"

Ike Rhodes, as a student in geology, had to take a course in metallurgy under Professor Hofman. It was not to his liking, but after flunking it the nth time he finally came to the conclusion that he ought to receive a pass mark just for the time he had spent listening to the lectures. Accordingly, he presented his views to the professor, who held an opposite opinion and shut off all further debate by saying, "Mr. Rhodes, I haf flunked you once, I have flunked you twice, and if you don't do better I vill flunk you again once, you see if I don't!"

No opportunity was lost twenty years ago for a rush between the freshmen and sophomores. '96 had not been a month at the Institute when one morning such an occasion came at the end of an hour when the freshmen had just finished an exercise in Huntington Hall, and on their exit found the sophs waiting to go in for the next hour. The conflict started without delay, just outside the door. An S. O. S. signal was sent downstairs and Harry Tyler, who was then secretary, came rushing up and jumped into the middle of the fray. The freshmen had not been long enough in school to come in contact with Harry, and were inclined to resent the interference of an unknown, especially as Harry had not acquired at that period, the look of age and gray hairs of experience that are now his attributes. The result was that Harry received rather rough treatment, and it was not until President

Walker, whom we all knew, appeared, that the fracas was quieted down. Even then it was renewed outside of Rogers. One of the vivid pictures which stands out in the memory of the writer is that of Mort Tuttle, with bloody nose and torn garments, brandishing the splintered remains of a miniature blackboard, inviting the sophs to come on and mix it up with him.

J. G. Callan was always a cool, calculating individual, even as a student. Back in the days of '96 the 3d year physics heat lectures were given by Harry Clifford. One day the lecture had started, and Harry had made on the blackboard a sketch of an empty space. Then after chalking his cue he began in his characteristic lucid way as follows: "I have here, (pointing to sketch) a space, for example, this room. If now I introduce a cold body into this room then . . ." At this point, the door of the lecture room was seen to open slowly and noiselessly and the body of J. Gurney intruded itself. It is needless to say that the resultant effect was not exactly what the professor had intended to demonstrate.

One of the men who worked in the chemical laboratory was noted more particularly for his diligence and persistency, rather than for his especial brilliance. In consequence, he very often called upon some of his classmates to explain a point which he did not understand. One day his neighbor noticed that he seemed to be thinking very hard and asked him what was bothering him. Now, it appears that Professor Talbot, in the lecture that morning had told the class, that in making a special determination under consideration it was advisable to first "tare a watch glass." The above mentioned student had put this carefully in his notes, but when he came to read his notes he was puzzled as to how to carry out the operation, and showed this by his actions, so that when his neighbor asked him what was on his mind and offered to help him he forthwith accepted, and unbosomed himself in acknowledging that he did not understand what Professor Talbot meant when he told them "to tear a watch glass." His adviser was very anxious to help, and, from his store of knowledge immediately explained that the "tearing of a watch glass" was one of the most difficult problems in chemistry, and that in his opinion, Professor Talbot had been unwise in asking the class to perform the operation; but since he had asked it, there was nothing to do but go ahead. The operation consisted of the following steps:

1. Select a fairly thick and large watch glass.
2. With a three-cornered file, this watch glass was to be filed very, very carefully on a straight line passing through its exact center. The filing operation must be so performed that in no case was the glass actually filed through, but nevertheless the cut must be made deep enough so that when ready for the final step of "tearing," the glass will readily come apart.
3. After the filing is finished, the student grasps the watch glass in his two hands and by a strong pull "tears" it into two halves, along the line which has been filed. This step is the crucial test of the chemist's ability, because when thus torn the two halves should weigh exactly the same, and if they failed to do so, the entire operation has to be repeated.

The student was very grateful for all this help and immediately got busy and found that the whole laboratory was interested in the operation; in fact, it was so attractive that the gathering of the students was noticed by the instructor and forthwith investigated. The operator explained to the instructor how he was carrying out Professor Talbot's orders, but the instructor decided that the same result could probably be obtained without such an expenditure of time and energy, and therefore advised the student to suspend operations. This was a great disappointment to the class who were looking forward to the completing of an experiment which had probably never before been attempted, and very likely will never be attempted again.

1897.

JOHN A. COLLINS, JR., Sec., 67 Thorndyke Street, Lawrence, Mass.

Word has just come to the secretary of a sad happening to one of the family of W. A. Gleason, Course I, who is now in Seattle. On the Sunday before Christmas the house of Mr. Gleason was destroyed by fire and Merton, the youngest child, lost his life. Surely the deepest sympathy of all the class will go out to Mr. and Mrs. Gleason in their loss.

As an instance of public service work being done without remuneration by Institute men, we cite that of Walter Humphreys, registrar. Mr. Humphreys has served as secretary of the Alumni Advisory Council of the Boston English High School, and also as one of a committee appointed by the City Planning Board to consider the problem of Public Markets for the Town of Brookline. He is also a member of the School Board.—James W. Smith, XIII, has been made general superintendent of the Gray & Davis factory at Cambridge. They are makers of automobile lighting and automatic starting equipments.

At the alumni banquet at the Copley Plaza on January 8 were Worcester, Bradlee, Sawtelle, Jackson, A. W., Dougherty, Alden, and Binley.

At the class dinner held at the City Club on February 15 there were present Carty, Currier, Estabrook, Allen Jackson, Harry Sawtelle, and Breed. Bowling was enjoyed, succeeding the dinner.

It has been decided to hold the twentieth anniversary of the class this year, simultaneously with the dedication of the new Institute and the grand Technology Reunion. This is in accordance with the returns of the postal card ballot. No decision has been made yet as to where the reunion shall be held. Details will be announced later.

—The *Electrical Review* prints the following interesting item:

D. P. Abercrombie, Jr., who was recently elected vice-president and general manager of the Connecticut Valley Street Railway, the Northern Massachusetts Street Railway and the Concord, Maynard & Hudson Street Railway, is a graduate of Massachusetts Institute of Technology, class of 1897. Since his graduation Mr. Abercrombie has been an important factor in the progress of New England traction facilities.

The secretary offers a bunch of reminiscences which some of the fellows may recall:

All the Course V and X men of '97 remember the advent of Dr. William H. Walker as assistant in the 2nd year laboratory. Fresh from Göttingen, he had a vocabulary that was perfection, not only in beauty and force of expression but also in extensiveness. Like Shakespeare he never repeated, but yet when occasion demanded, he could keep on for minutes without repetition. It might be added here, that after his marriage, which seemed to have a chastening effect, his remarks were less picturesque. One

Saturday afternoon as time dragged on, a number of we fellows started a game of pitching pennies, standing in one of the alleys, and pitching toward the raised platform along the side. Along comes Doctor Walker who becomes very interested in our game. After several throws and when some of the fellows were pitching dimes and nickels in place of pennies, the Doctor suddenly assuming a puritanical air, stooped down, gathered in the "pot" and with the remark, "Boys, we can not allow gambling" he faded away. One of the boys remarked, "Say, Doctor why didn't you say you were broke, have you got enough to last you?"

The class in textile coloring was located on the third floor of Walker Building in the corner room facing the Brunswick. The famous beauty, Anna Held, was then making her first visit to Boston, and was inviting "everyone to play with her, because she had such a way with her." She was staying at the Brunswick and every afternoon would take a ride on her tricycle propelled by a servant. Dressed in a very short suit of cream serge she was a very attractive sight, and poor John Smith, our instructor, would go almost crazy trying to keep the class away from the windows. But the boys preferred to study the brilliant colors on Anna's cheeks to the dull colors in the dye pots, and not until Anna blew out of sight, would work begin.

John Smith, good old soul, professor of textile coloring, had another source of anxiety in connection with the '97 Course X men. The fellows used to come in about ten o'clock and put in the remainder of the day. This would mean bringing lunches and most wonderful were some of the delicacies (?) concocted in the dye pots. Strolling through the lab. one day about lunch time Mr. Smith saw one of the fellows, I think it was Elson, pick up a beaker full of a clear yellow dye solution, and take a good drink. "Here, lad, are you gone daft?" was his remark, as he hurried to the man's bench. "Oh no," drawled Elson as he offered him the beaker, "have some of what made Milwaukee famous?" I am not telling any tales, so I won't say what the Professor replied, neither will I tell who used to smuggle the amber fluid into the Lab. But many were the mix-ups, when one man would change another fellow's beakers so he would be trying to dye with beer, and running the risk of dying with dye.

1898.

A. A. BLANCHARD, Sec., Mass. Inst. of Tech., Boston, Mass.

The following clipping from *The Tech* tells a little of Hurter's activities:

Mr. Charles S. Hurter, '98, of the Hercules Powder Company of Wilmington, Del., will address the Mining Society Thursday night, March 16, at 8 o'clock in the Union on the subject of "Explosives." The Hercules Powder Company is one of the three separate companies formed from the du Pont de Nemours Powder Company in its recent reorganization, and Mr. Hurter, as the technical representative of

the company, travels about the country explaining the use of the various explosives manufactured. He is in constant touch with the active market, and can therefore talk on the latest developments and requirements of the powder business.

Porter stopped in a moment the other day. He is in charge of the City Point Plant of the du Pont Powder Company. He has 14,000 men under him, as against 400 before the war, and he is now making 650,000 pounds of smokeless powder per day. This is a pretty rapid expansion! He says that he wishes the war would end today.

The following clipping is taken from the *Engineering Record*:

Major George B. Pillsbury, Corps of Engineers, U. S. A., has been assigned to duty as district engineer officer at Los Angeles, Cal. Major Pillsbury received his professional education at Massachusetts Institute of Technology and the U. S. Military Academy, being commissioned in the engineer corps of the army in 1900. Since that year he has been engaged in the construction of fortifications in this country, road and bridge construction and surveys in the Philippine Islands, and, as engineer member of the Alaska Road Commission, on road and bridge construction in Alaska. From 1908 to 1912 he served as associate professor of mathematics at the U. S. Military Academy. Previous to his present assignment he served as district engineer officer at New London, Conn.

Early in the fall President Jacoby of the Society for the Promotion of Engineering Education was asked by the Secretary of the Navy to suggest the names of five experts in education to visit the Naval Academy and consult with the officers in regard to the work of that institution.

Prof. George F. Swain, '77, and F. L. Bishop of our class were among those selected.

These men visited the Naval Academy on January 27, 28, and 29 and at this visit made a study of the post-graduate work, and were appointed by the committee to present the report to the Secretary of the Navy as soon as it is completed.

Bishop is secretary of the Society for the Promotion of Engineering Education, professor of physics and dean, School of Engineering, University of Pittsburgh.

Winslow has the following to say about the class and about himself:

I am very sorry that I could not be at the dinner on Friday evening, and I was not even able to write you before the dinner occurred because I have been away for a week on a court case in New York. I wish I could have been with you, for I am very anxious to know how the plans are progressing for the June Reunion. Have you got a class stunt planned out?

I left the New York State Department of Health last fall to take a new chair in this school, the Anna M. R. Lauder professorship of public health, which has been specially endowed. I have courses in the Medical School, Academic Department, and the Graduate School, and a great many interesting problems in connection with the general health situation of the state. I still go up to New York once a week to keep up my work at the American Museum of Natural History.

—Mr. and Mrs. Edward S. Wiard announced the celebration of their crystal anniversary, on Saturday, the 4th of March, 1916, at Denver, Colo.

Ninety-eight had an informal dinner at the Engineers Club,

Boston, March 17. E. R. Russ, Barker, Davison, Dawes, Goodrich, Chapin, Blanchard, Richmond, Pop Coburn, G. E. Fisher, C. H. Smith, Peavey and W. E. Kimball, were present. Kimball has for some time been out of the shipbuilding business, and he is now with the American Sugar Refining Company, in Boston.—We heard that Coombs has left Edmonton, Canada, and is now in Los Angeles.—Sickman has left London and is in business in Springfield, Mass.

But the great thing talked about at our dinner was the coming great Tech Reunion, June 12, 13, 14. Everyone said that he was coming and reported that classmates from all over the country were coming. It will probably be the biggest gathering of ninety-eight men since graduation. The one special ninety-eight gathering will be the class dinner Monday evening, June 12, at the City Club. Tuesday is stunt day, at Nantasket, and judging by the committee that has agreed to engineer the stunt—Russ, chairman, Chapin, Richmond, Coburn, Gardner—we are sure of pulling off a stunt that will make an impression.

1899.

W. MALCOLM CORSE, *Sec.*, 106 Morris Avenue, Buffalo, N. Y.
 BENJ. S. HINCKLEY, *Asst. Sec.*, North Station, Boston, Mass.

MONTFORT HILLSMITH—AN APPRECIATION.

Since I learned of Montfort Hillsmith's death on April 27, I have wanted to write something about him, for I think I can honestly claim to have been one of the few who really knew him and appreciated his personal qualities and his peculiar genius at something of their real worth.

I do not think I ever knew anyone who was more perfectly that curious and elusive thing—a genius—than Montfort Hillsmith. His sense of concrete and subtle beauty was unique, and in everything he did was that strange quality of distinction that is so unusual even amongst all workers in art of the present time. Whatever he did was *sui generis* but it was always beautiful, whether it was illumination, decoration, metal-work, calligraphy, or any other of the multifarious modes of his self-expression. Every time he came into my office, I knew I should see some new and delicate and truly mediæval thing, and, as so often happened, if it proved fantastic, elfish even, so much the better, for these qualities never marred the work; rather they gave it a novel tenour that enormously enhanced its value.

He certainly had it in him to be a great decorator in the sense that the Byzantines, the XII century workers in Fresco in France, the Lorenzetti of Siena, the glassmakers of the XIII century were decorators, and there is no higher form of art than this. With the "Fine Arts" as they were and are understood in the XIX

and XX centuries, he had no sympathy whatever, and because of this he suffered, and—as the world would hold, I suppose—failed. I used to think, while he was living, of the quaint and grotesque contrast between what he was doing and could do, and the average picture-show of the day, and the absurdity of the antithesis was very entertaining.

I suppose the whole point is that the picture-shows adequately and exactly expressed the temper of an era then sickening to its end, while Montfort Hillsmith's art was the expression of the new era that even now is only coming to birth in the agonies of a world's dissolution. The same was true of him: he was a stranger in a strange world, unable to meet a people he could not understand or use a tongue of which he was *defiantly* ignorant. He was the most pitifully sensitive man I ever knew, and the most self-mistrustful; I used to try to make him appreciate in some degree the quality of the work he was doing, and could do, but his stubbornness was baffling. He simply would not believe in himself, and I think this was due to the fact that he realized how utterly he and his art were different to what the world was and wanted, and he lacked the calloused self-confidence that would have made another a victorious fighter, whatever the odds.

I have always said Montfort Hillsmith was perfectly mad, and I can repeat it now, for I mean it as high commendation. Between him and the environment the world offered there was no truce, no possibility of correspondence or compromise, and I suppose this is what constitutes madness. Had he been born a century later he would, I think, have found himself *splendidly sane*, and yet he would have been the same self; the environment would have been changed, that is all.

Well, all that he did is not lost, though it must wait a little for its fruition. His ideals, his very beautiful dreams, have somehow, and mystically, become a part of the content of the world, held in solution as it were, until the great world-change has been accomplished, when every one of them will infallibly be precipitated through personalities that will owe so much to him—and never be conscious of the fact.

I don't think this is a tragedy; after all he has done his work and, by and by, the world will profit by it. Does it matter if he could not give it all visible form, himself, since he has been granted the privilege of changing from a sphere of disappointing and sometimes sorrowful effort, to one where he will see his dim vision clear and radiant, and no longer "as in a glass, darkly"?

RALPH ADAMS CRAM.

We have the following letter from Phalen, describing his work, which will be of interest to the class:

My work takes me away from Washington periodically and my absence, especially during the summer months, is prolonged. Take for example, my program during the past nine months: I spent the month of June, 1915, examining the

phosphate deposits of the Blue Grass region of Kentucky. During early November last, I spent some weeks in central and south Georgia looking up bauxite (aluminum ore) deposits. During January of the present year, I investigated the marl deposits in New Jersey as a source of potash salts. During the intervening time, I was in the Washington office. I expect to be in Tennessee during part of May coming, but have several reports to prepare before I can go into the field.

My field work and office work make a pleasant combination which I greatly enjoy.

I cannot say whether I shall be in Boston to attend the ceremonies connected with the opening of the new building. I should like to very much however.

According to a recent news item, E. R. Sheak of our class, or rather his automobile, is responsible for the early removal of the semaphore at Tremont and Winter streets, Boston. His car, operated by himself, struck the semaphore a slanting blow, effectually putting it out of commission—temporarily at least. The article did not state the condition of the car or its occupants after the accident.

In response to the call for reminiscences the secretary has received the following contribution from MacBride:

My preparation in French was sufficient in "Prep." school to have enabled me to have passed it off during my entrance examinations but as I had not been "wised up" I started to take it over again.

Among some of the upper class men whom I met during the first few days, some asked me whom I "had" in certain subjects and when I told them "Charlie Bernard" in French, they raised their eyes to Heaven and simply said, with deep feeling, "God help you." The result being that I became so scared that I cut the French class for two weeks. Finally I did not dare go any longer so I timidly entered the classroom, walked diffidently up to the desk and said, very boldly but with a queer feeling inside, "I made a mistake and got into the wrong classroom." Charlie glared at me, asked my name, and remarked it required a long time for me to find it out.

Being well prepared I had no trouble in class. One day in the late autumn, as we were standing outside of the building ready to go in to class, an Italian vender of statues came around with a lot of them in his basket. On the spur of the moment I said to the fellows standing near, "If you chaps will buy that Venus de Milo I will present it to Charlie Bernard," thinking that the cost would be considerable and they would not take it up. The man telling them the price was only twenty-five cents, they at once bought it, gave it to me and then waited for me to start in with it. I lost my nerve and, wrapping it up in a paper, took it over and left it in my locker at the Y. M. C. A. building on the corner of Berkeley street, until next class.

Being well fortified within, the next class in French saw me entering the room with Miss Venus (or was it Mrs. Venus) safely tucked under my arm, well covered by a nicely tied paper. Going up to Monsieur Bernard I said, "Mr. Bernard, in behalf of this section in French I wish to present you with a slight token of our esteem, in the form of a copy of a beautiful form which you will probably much admire." He took my parcel, uncovered it, held it off at arms length and fairly beamed upon it and us. Then putting it down on his desk he slowly turned it around and then taking out his handkerchief carefully covered her up.

Thanking me personally and the whole class for our thoughtfulness he proceeded with the lesson. From then on my work in French was a pleasure and he did not flunk any of us at the mid-years.

A portion of the '99 freshman class used "Principles of Rhetoric" by A. S. Hill. I was one of the unfortunates.

In my library at home my old school books have an important place and on the back page, next the cover, there is written in lead pencil:

"Freshman class in English ('95)."

Prof. Arlo Bates, "What part of a sentence is the most important?" Looks at list of cards in his hand and calls, "MacBride."

MacB. rises slowly with much seeming difficulty from his seat and says, "The end of the sentence."

Prof. A. B., smiling sarcastically, "Which end do you mean?"

MacB. rising carefully, says gravely, "When I say the end, I mean the end. If I meant the beginning I should have said 'The beginning of the sentence.'"

Confusion of Prof. A. B.; smiles and laughter in the class room; retirement to his seat of MacB. feeling much better in his mind.

The secretary has received information of the death of Robert Grant Holabird on September 23, 1911. No details have ever reached us.

1900.

WILLIAM R. HURD, 2d.

RICHARD WASTCOAT.

PERCY R. ZIEGLER.

INGERSOLL BOWDITCH, *Sec.*, 111 Devonshire Street, Boston, Mass.

The class letters in the current REVIEW were all to be filled with reminiscences of the days we spent at Tech. Considering how much there was to remember it was thought that a space limit would have to be set on the letters in order to keep the edition within bounds. The actual lack of returns, however, suggests that the recollections of 1900 men were too painful to spread upon the printed page for all to read.

Ziegler writes that in these days of preparedness he is ashamed to write that in his freshman year he habitually tossed up a coin Wednesday afternoon to determine whether he would go to military drill or over to the Castle Square to see Clara Lane. And this in the face of such military ignorance on his part as to permit him to petition Capt. John Bigelow to be transferred from drill to the "band" instead of the "field music." Petition was denied. Another question of freshman days that has never been authoritatively settled is whether Wickes' erratic and uncertain course as he marched (?) with the Republican torch light parade was what originally suggested the serpentine dance.

Jim Batcheller may perhaps have given expression to the class feeling as to "recollections" when he writes:

While my mind is full of many such and all are of the most pleasant kind, some even amusing, but now that I am face to face with the pen and paper, I am darned if I can seem to give them real lively expression. I have been away from Boston so much, I do not know just how much real rough and tumble fun the modern Tech freshman gets. Who will forget our first "cane rush"? We tied '99 and arbitrated the decision, I believe. I don't recall what the arbitrators decided, but Chalmers had some good fun carrying an armored cane, strapped to his wrist and bristling with tacks. I understand all that sort of scrapping has been abolished. What a glorious financial muddle the class got into, right at the start,—over our competitive drill. It took three years to clear that indebtedness up and when we did finally square it off (by sending something like \$170 to Capt. John Bigelow, Jr., then in Cuba), it was a relief. I'll bet it was a relief to Captain Bigelow too. I guess he had some funny sensations when that money came tumbling in, all un-announced. I wonder how many of the fellows present at the last regular class business meeting realized that our payment of that loan to Captain Bigelow,

without any interest for three years, reduced our treasury to a balance of 30 cents. He wrote the class a mighty nice cordial letter of thanks, which, however, did not arrive until after graduation had scattered us all. As treasurer, it came to me in acknowledgment of the drafts I sent. I turned it over to Russell, and think, if it is still among the class archives, it would be well worth publishing in the REVIEW.

I understand that now the Institute Committee has grown strong and efficient, so the more recent entering classes are given a good boost in the right direction and are guided past such discouraging mistakes. It is a good thing, for if my recollection is correct the smooth "four eyed" lad who officiated as B.M. of 1900 *Technique* Board gave some juggling fine finance exhibition with the balance remaining from their transactions. Where is he now? And so it goes; experience always did come hard,—probably still does with most sons of Tech. I hope 1900 will be well represented when the big Reunion comes around.

W. S. Hart writes:

Unfortunately, I have never been able to go to Boston at the time the class reunions were held. I was thinking only the other day of a trip a section of the surveying class took over on to West Cedar street in order to measure the street. With the aid of a tape and a long plump bob we were successful in measuring Cedar street, taking a good part of the afternoon. On the return to the Institute we were walking across the Public Gardens with our heads in the air after this feat had been accomplished. In fact one fellow's head was so far in the air that he did not see the fountain in the center of the Garden and he tripped and fell over into it, thus ending a very pleasant day.

A clipping from the *Tonopah Daily Star*, Tonopah, Nev., reads:

Last Sunday morning who should arrive in Tonopah but Daniel S. Johnson, president of the Goldfield Blue Bell. Fresh from New York and the automobile show in Madison Square Garden, the first remark he unloaded was, "Well, I'm glad to be in a live town again!"

Johnson went to New York to get his watch fixed. On one of his hurrying trips to Berlin, Nev., he lost the key and the local watchmakers admitted their inability to rebabbit the old turnip, as none of them had a stillson wrench handy. While in Boston Mr. Johnson attended a reunion of the class of 1900, Massachusetts Institute of Technology, of which he is a member.

From the *Stone & Webster Journal* we have the following clipping:

Mr. Karl Burroughs, for several years vice-president and superintendent of the Fort Hill Chemical Company at Rumford, Me., has been appointed works-manager of the New England Manufacturing Company at North Woburn, Mass. Mr. Burroughs will continue as vice-president of the Fort Hill Chemical Company.

1900 men are urged to send in suggestions as to class stunt at Nantasket. It will be recalled that at the last All-Technology Reunion all we did was to play leap frog. It was good exercise but that was about all that could be said for it.

1901

ROBERT L. WILLIAMS, Sec., 70 Waban Hill Road, Chestnut Hill, Mass.

June 12, 13, and 14, the days of the Technology Reunion, are scheduled to be busy ones for all Tech men. Have all '01 men made their plans to attend? If not now is the time to do so.

As there will be several conventions in Boston at the above dates every man had better look out now for this hotel accommodations. Do not forget the special boat from New York or the automobile parties, but at any rate whether it is by boat, rail or auto, don't forget to come.

Our class will hold its annual dinner June 12 at 6 o'clock at the Hotel Bellevue before attending the smoker at the City Club. As this will undoubtedly be the largest attended dinner since graduation, all should arrange to arrive in Boston in time to take it in.

The following '01 men attended the annual Tech banquet at the Copley Plaza Hotel January 8: Appleton, Derby, Dow, Read, Seaver, Stearns, Taft and Williams. Needless to say the '01 cheer was heard during the evening.

The *Engineering Record* of March 4 has an item of interest to the class as follows:

Frederic Bass and Lee E. Rollins have opened a consulting office in the Plymouth Building, Minneapolis, for the general practices of civil and mechanical engineering, having to do with municipal works and the engineering and mechanical equipment for buildings as their specialties. Following Mr. Bass' graduation from the Massachusetts Institute of Technology in 1901 he spent three years with the Metropolitan Waterworks of Boston, one year in the U. S. Engineer Corps and fifteen years at the University of Minnesota, where he is now professor of municipal and sanitary engineering. For eight years he was in charge of the engineering for the Minnesota State Board of Health. For two years he was in private practice in municipal engineering.

Walter A. Read has given up his position in the Brooklyn Navy Yard and is now located in Boston, in business for himself.—The managing geologists of the Associated Geological Engineers announce the opening of a New York office in charge of F. S. Clapp, managing geologist of their petroleum division.

The deep interest that is being taken in Montreal in augmenting the armies of the British Empire, and the study of the problem of how to deal with the returning wounded soldiers so that they can secure employment, attracted a large gathering to the Canadian Club luncheon at the Windsor Hotel recently. The lecturer was Mr. F. H. Sexton, principal of Nova Scotia Technical College, Halifax.

The above appeared in the *Montreal Herald* together with Sexton's speech.—V. F. Holmes is president and treasurer of the Power Equipment 60, Boston. He is also engaged in the exportation of zinc oxide and white lead to Scandinavian countries.—Austin T. Hyde has been appointed acting superintendent of the Fort Hill Chemical Co., at Rumford, Me.

It has been suggested that each class supply itself with a new class banner for the Reunion. The secretary would be glad to receive designs from some of the class artists.

The following recent address changes have been received: H. B. Chalmers, Babylon, Long Island, N. Y.—C. M. Culp, 642 University St., Walla Walla, Wash.—C. A. Record, 49 Westbourne Terrace, Brookline, Mass.—Edward Seaver, Jr., 201

Devonshire St., Boston, Mass.—E. B. Belcher, 35 Everett St., Arlington, Mass.—F. S. Clapp, 120 Broadway, New York.—N. K. B. Patch, 172 Linwood Ave., Buffalo, N. Y.—F. W. Puckey, 6 North Michigan Ave., Chicago, Ill.—C. P. Rockwood, 1321 N. Meridian St., Indianapolis, Ind.

1902.

FREDERICK H. HUNTER, *Sec.*, Box 11, West Roxbury, Mass.
J. ALBERT ROBINSON, *Asst. Sec.*, Box 135, Canton, Mass.

On March 1 the class held an informal dinner at the Boston City Club and were glad to welcome several members who have not been at a class gathering for many years. Merton L. Emerson, '04, and B. C. Batcheller, '86, of the Lamson Service Company were guests, and Mr. Emerson gave an interesting talk outlining the plans for the Grand Reunion in June. Jason Mixter followed with an interesting account of his experiences while on a four months' tour of duty at an American Ambulance Hospital in France. The talk was illustrated by a number of views which Mixter took in spite of the general prejudice against photography in France at the present time. Mixter was three months in Joue where a group of college buildings had been turned into a hospital and later spent a few weeks at other hospitals close up to the battle line, and all he had to tell of his observations proved highly interesting.

Those present, besides Mixter, were Jimmie Brown, Al Crowell, Walter Fitch, Galaher, Greeley, Geromanos, Hunter, Reynolds, Ritchie, Robinson, Shedd, Jimmie Smith, Stillings, Teague, Titcomb, Murray Walker, Rob Whitney and Doc Williams.

The first issue of Volume II of the *Retort* went out in February and has brought in a large number of responses for the Class Book and also for the class treasury. A number of men have reported their intention of coming on for the Reunion and there is every prospect that the number of classmates present in June will exceed that at the last general reunion in 1909 or the Decennial Reunion in 1912, at both of which times between fifty and sixty men were on hand. While no formal poll has yet been taken, it is probable that the attendance will exceed seventy men and may reach eighty or more. The next issue of the *Retort*, which will reach the classmates about as soon as this issue of the *REVIEW*, will call for a show of hands in regard to attendance. While details have not been completed at this writing it is settled that a week-end outing will be held over the Saturday and Sunday preceding the General Reunion and all classmates coming from a distance should make their plans to take in this informal "get-together," which they can do by arriving in Boston on Friday, June 9, or Saturday morning. Full details will be given in the *Retort*.

In the last issue of the REVIEW we bulletined a large number of children and we can now add several more to the list. Howard Gardner Rogers, who was born in 1915; Herbert Schaw May, Jr., born December 5, 1914; George Meinhard Alsberg, July 20, 1915; Shirley Bonnemort, February 1, 1914; Florence Yvonne Davies, August 1, 1914; Nancy Kimball, 1915; William Jason Mixter, Jr., August 14, 1915; Albert A. Haskell, Jr., December, 22, 1915, and Bayard Walker, who arrived in New York on February 25, 1915.

Walter Wellman has moved to Montvale, N. J., where he continues his business as cartoonist.—Jimmie Smith is now located with Bodell & Company, 35 Congress street, Boston, where he is engaged in the sale of public utilities securities.—Captain Worcester is again located at West Point. He expects to spend the summer in the field as an instructor at training camps and militia manoeuvres.—Seabury is division engineer for the Providence (R. I.) Board of Water Supply, his address being 34 Taber avenue, Providence.—Odell is with the Brown Metallic Products Co., of Detroit.—Dr. Lind is chemist in radio-activity for the United States Bureau of Mines, 501 Foster Bldg., Denver, where he is engaged in perfecting the methods of extracting radium from the Colorado ores.—Bill Lewis is now a member of the M. W. Allen Construction Company of Walpole, Mass. His home address is still Foxboro, Mass., where he is water commissioner.—Rev. Philip C. Pearson has just accepted a call to the rectorship of St. Michael's Church, Naugatuck, Conn. His pastorate of nearly seven years at Ridgewood, N. J., has been most successful and has been marked by considerable growth in the parish and a large reduction in the mortgage under which the church was struggling when he went there.—Marvin is sales engineer, representing the Weston Electrical Instrument Company in Detroit. His office being 623 Dime Bank Building.—Bill Mansfield has been located, ranching at Perris, Cal., a short distance from Los Angeles. His specialties are alfalfa and hogs. He states that when he left his previous job at Ocampo, Mexico, he was in such a hurry to get a view of his native country that he didn't stop at the post office to leave a forwarding address for his mail, which accounts for recent class notices not having reached him. He also left a stamp mill and cyanide plant on which he had done a good deal of work.—Paul Hansen is with the Engineering Bureau of the State Board of Health, Springfield, Ill. —Martin Hamblet is in Sweden setting up one of the Whiting Company's chemical plants for a large paper manufacturing company.—Dana Fisher has moved from Cambridge to 41 Commonwealth avenue, Chestnut Hill, Mass.

The grand sagem of the REVIEW decreed that this number should contain reminiscences of our student days but '02 men have mostly been too busy piling up wealth so that they can attend the Reunion next June to spare time for recording their recollections. This is to be regretted when one considers that we were partici-

pants in the last great rush ever held in Rogers corridor, that we defeated '03 by the largest score ever made in an interclass football match, and were the only class that ever graduated every man who was a candidate for the degree. Childs from Pittsfield sends the following interesting incident from his solid geometry course, freshman year:

The instructor started to explain a problem and asked me to take it up at a certain point; after I had carried on the proof for some time he wanted to know what reason I had for accepting the preliminary statement. This proved a serious shock to my faith in his ability, but, deciding to humor him, I stated that *he* had said it was so. But what do you think, I had to go over the whole business from the beginning and when I had showed him that he had made no mistake he was properly grateful. One of the class nearly fainted from the stress of emotion and only revived when the window was opened.

The class secretary recollects one incident connected with the Institute which occurred the spring following his graduation. At that time he was working for the well-known contractor, Frank B. Gilbreth, now the noted efficiency expert, who had made a record in the construction of Lowell Building and Engineering C for the Institute. A hurry call came in for the construction of a booth to be used for the distribution of *Technique* and the design and erection of this structure was placed in our hands. As there were no data available as to the stresses that his building might have to stand, no chances were taken and the strongest materials were used. The building was semicircular in plan, backing against the rear wall of the old Art Museum and presenting no corners on which a man might be hurt during the Annual Rush. A small window high above the ground was the only point of attack and through this the *Techniques* were to be passed out at the appointed hour. The roof of the structure was steeply slanting so that no student could find lodgment there. Despite the strength of the construction we remember some anxious moments as we watched the rush take place, but the building stood the strain and, being made in sections, was stored away and has served for many years since for this annual contest. So far as we have learned its modulus of rupture has never been found.

While this issue of the REVIEW will be the last to reach its readers before the great Reunion, '02 has, in the *Retort* a means of getting further data before its members, and we note that other classes are following in the wake of '85, '90, and '02 in issuing class publications.

1903.

MYRON H. CLARK, *Sec.*, 1790 Broadway, New York, N. Y.

RALPH H. NUTTER, *Asst. Sec.*, Box 272, Lynn, Mass.

The *Danbury News* informs us that on January 12 Miss Katherine C. McNiff became the bride of Caspar A. Schmidt of Detroit, Mich. Mr. and Mrs. Schmidt left soon after for a wedding trip

to New York City and points in the West. They expect to visit Detroit, Denver, Salt Lake City and Los Angeles. Mr. Schmidt is a mining engineer and at the present time is located at Socorro, N. M., where the couple will make their future home. Among the guests at the wedding were Mr. and Mrs. Robert J. King of Stamford.—Fred Olmsted came East for awhile along the first of January and spent a few days in New York and Boston visiting classmates. He happened to be here just at the time the alumni dinner was held in Boston and helped Nutter, Atwood, Aldrich, Joyce, Taylor, and Gleason to represent '03.—Sears journeyed to Cuba, the Isle of Pines and Panama after his illness of typhoid and returned in the best of health.—G. H. Gleason has gone in for mechanical equipment with an office at 141 Milk street, Boston.—We notice on the letterheads of the American Chemical Society—New York section—that C. M. Joyce is secretary and treasurer.—Hope you are all planning for the "Big Time" June 12-14. The notices wax more enthusiastic every mail and you are sure to miss a lot if you don't go. **DON'T FORGET IT!**

1904.

HENRY W. STEVENS, *Sec.*, 39 Boylston Street, Boston, Mass.
AMASA M. HOLCOMBE, *Asst. Sec.*, 510 Pine Street, St. Louis, Mo.

This issue of the REVIEW is "Reminiscence number" but some of these notes are not reminiscences, so the secretary feels that he should dispose of the non-reminiscent portion first and finish up with the "bygone days" stuff.

For recent happenings, the memory of the secretary does not extend back beyond January 8, 1916, the occasion being the annual alumni dinner. Our class was represented as usual, our delegation not being noted for its size. The location of our table was much better than usual, it being in the line of tables nearest the speakers. This shows that we are gradually creeping into the front rank. Only the fact that the table was on the extreme end of the front row prevented the location from being ideal. We could hear some of the speeches and by watching those sitting in the middle of the hall, we were able to cheer and applaud at the proper moments. We were seated directly under the orchestra and consequently were able to hear all the music. As we were seated at the point where the Tech cadets made their entrance, we were enabled to score a "scoop" on the rest of the banqueters and lead the roar which welcomed the soldiers. We also outdid previous records in giving our class yell, giving it no less than six times. To show the magnificent volume of our cheering, the secretary has but to relate the following incident: Ike Litchfield and the class of '85 were seated at a table about fifteen feet from us. We gave our class cheer for '85 and at the end waited for Ike to arise and acknowledge it with his customary

smiling bow. However, nothing happened. Finally Mert Emerson went over and advised Ike that the cheer had been given. "Is that so?" said Ike, "I didn't hear it." Those present were Munster, Parker, Whitmore, Ferris, Haley, M. L. Emerson, Wentworth, Comstock, Gunn, and the secretary.

On February 28, a class meeting and dinner was held at the City Club, the primary object being to start something in regard to the coming reunion in June. Seventeen attended, the full roll of honor being as follows: M. L. Emerson, Stebbins, Haley, Hiller, C. J. Emerson, Elwell, Homer, Galusha, Doten, Hayward, Sweetser, Gould, Whitmore, Rockwood, Ferris, Munster and the secretary.

Considerable discussion was brought out along various lines, and it was decided to hold our twice-postponed tenth reunion just before the Grand Reunion. A committee, consisting of Munster, chairman, Homer, Sweetser, M. L. Emerson, and Galusha, was appointed to make arrangements for our tenth, to be held on June 9, 10 and 11. Further particulars will be forthcoming later regarding this matter. It is earnestly hoped that we may be able to have a big attendance, and that our tenth will be a big success.

Tentative plans were discussed regarding the participation of the class in the Grand Reunion, and a committee for the class stunt was appointed, this committee consisting of Rockwood, chairman, Hiller, C. J. Emerson, Elwell, and Gunn. As all the plans for the reunions will be presented to every member of the class in special literature, it is not necessary to dwell upon them here.

The secretary does not wish to lose any opportunity to urge all the members of the class, who can possibly do so, to attend the coming reunions. If it is impossible to be present for the entire time, come for as much as possible. Make an effort to be present on Tuesday, June 13, the stunt day at Nantasket, as it is especially desirable that the class be well represented at that time. The class dinner will be held Monday, June 12, at 6 p. m. at the City Club, immediately before the big smoker, held at the same place. Both of these events will be well worth attending and should not be missed by any class member.

Remember the dates, June 9, 10, 11, 12, 13, 14, and plan to be in Boston. There will be something doing every minute. You will meet fellows you haven't seen for years and the experience will be worth all the effort and expense it may mean for you.

The following letter from Merryweather has been received, in answer to the request for news made to our "Foreign Legion." Merryweather is vice-president and general manager of the Bethlehem Chile Iron Mines Co., located at La Higuera, Coquimbo, Chile:

Although it takes from four to ten weeks for mail to reach here, it is now some time since I received your letter of last June.

After spending four years in Mexico I left in time to avoid the revolution and went to Cuba for the Juragua Iron Co. However, I did not altogether miss revolu-

tions as one spring when the mangoves were ripe the negroes arose. It was, therefore, declared "open season" for negroes and many were killed. As on-lookers we felt safer with two companies of U. S. marines on the property. Aside from being the oldest iron mines in Cuba, the place is known as the scene of Davis' "Soldiers of Fortune" and a moving picture company made films there. Also "Siboney" and "Las Guasimas" of the Spanish-American War are on the company's land. The mines are owned by the Bethlehem Steel Co., and I was sent from Cuba to Chile two years ago.

Here a plant is being installed capable of handling 5,000 tons per day. The installation includes a basin dock with a capacity of 50,000 tons; also there will be twenty-three kilometers of electric railroad on a 3 per cent. grade, and use will be made of the power generated by the descending train. The whole plant will be up-to-date and the work is now well advanced.

In Santiago I met Tom Hamilton whom you may remember at Tech. He is associated with William Braden of the Braden Copper Co. who also is an old Tech man.

I am anxious to hear of the Reunion as I have hopes of being there.

A card has been received from Selby Haar announcing the fact that, after March 15, his address is 2040 Seventh avenue, New York City.

This letter, on the stationery of the Vilter Manufacturing Co., Milwaukee, Wis., builders of refrigerating and ice making machinery, improved Corliss engines, and machinery for brewers and bottlers, announces recognition of the merits of one of our class. As an alumnus of the Massachusetts Institute of Technology, the following information concerning W. R. Kremer will be of interest to you:

Waldemar R. Kremer was appointed general sales manager of the Vilter Manufacturing Company at the recent meeting of the Board of Directors, succeeding the late Mr. Fred Ulrich. Mr. Kremer has been connected with the company for nearly ten years as consulting electrical and mechanical engineer in the Sales Department. He is a graduate of the electrical and mechanical engineering courses of the Royal Polytechnical Institute, Munich, Germany, and the Massachusetts Institute of Technology, Boston, Mass.

In his new capacity he will have general charge of sales and supervision of branch offices and agencies in this and foreign countries.

Ed. Parker and Mrs. Parker have both been confined to their home with scarlet fever the past four weeks but are on the road to recovery. The secretary, fearless of results (never having had the disease himself), conversed with Ed. over the telephone, and Ed. says they will both be on deck in June for the Grand Reunion.—Don Galusha has vibrated between Buffalo and Boston, lately, as he is connected with a big generating station being erected in the former city by Stone & Webster.—A new firm of architects has recently been formed in Austin, Texas, under the name of Kuehne, Chasey & Giesecke, according to the *Statesman* of that city. We quote as follows:

Bertram E. Giesecke received the degree of bachelor of science in architecture from the Agricultural and Mechanical College of Texas in 1911 and the same degree from the University of Texas in 1913. He was graduated at the Massachusetts Institute of Technology, and has been for some time professor of architecture at the University of Texas.

The new firm will care for the general practice of architecture in all branches

of the profession including the design and superintendence of domestic, industrial and public buildings, architectural engineering, landscape architecture, civic design, and interior decoration.

The young men making up the firm are all well known in Austin and already have considerable work under way. They will be glad, indeed, to see their friends and to confer with persons who need the services of first-class and experienced architects who know how to care for architectural work and to give it the closest attention.

Reminiscences

In response to the request of the editor of the REVIEW the secretary asked a number of '04 men located in or near Boston, to send in a few remembrances of their Institute days. As a result, the following letters were received, some of which recall vividly to the secretary, the events mentioned, and the secretary expresses the hope that all who read them may find in them something which will bring to each one memories of the days we spent together in Rogers, in Walker and the other old familiar buildings, to which the Institute is soon to say "good bye."

From "Reggie" Wentworth:

I was sorry not to get to your class meeting the other night but it came just before a final examination. Having reverted to a second childhood, an evening course in cotton spinning at the Lowell Textile School seems to be a necessary part of my education. It is an awful thing again having to go through the dread of examinations, after having been free from them for so many years.

Your request for a reminiscence arouses chiefly a recollection of yourself and the bass drum and your zeal in the performance of band duty.

I wonder in these days of martial enthusiasm if the manual of arms is any less detestable than of yore, and if service with the band is still one of the few means of evading drill.

The secretary well remembers his part in the band, as well as the fact that Reg himself was a versatile performer, in that same aggregation of musicians, sometimes accomplishing wonders with the baritone horn, and at others valiantly endeavoring to blow all the curves out of a slide-trombone. From the exhibition given by the cadets at the alumni dinner the secretary is of the opinion that the manual of arms receives more careful attention than at the time when we were at the Institute.

From "Tammy" Rockwood:

I remember very distinctly in freshman drawing that I got one of the plates done ahead of time. I showed it to Mr. Burrison and he refused to accept it. I then gave it to Joe Crowell, who erased my name and marked "Cy" Ferris. He then passed it to someone else who dropped it in the box and the first Cy knew of it was when he saw a "P" on the bulletin board for that plate and he had not yet handed it in.

Another time I got away with my best bluff in "Analyt." There was a problem for the day which no one had been able to do. Professor Bartlett called for volunteers and I spoke up. I went to the board, drew my diagram, stated my assumptions and what I was trying to find. That happened to be as far as I could go, but just then the Professor said, "Very good, Mr. Rockwood, Mr. ——— will continue from there."

I think the mark that I was proudest of was one I got in a course on business relations by Professor Chandler. I petitioned to take the course as it was not a part of my regular work and, after I petitioned, changed my mind and did not

even go to the first lecture and register. I doubt if there was any exam, at least I did not take it, and when the marks for the term came in I was delighted to receive a "P" in the subject.

Do you remember one day in English lit. when Arlo asked to have all books brought to the platform and most of them came by air line?

I remember when Reggie Wentworth was manager of the Show that tickets were issued on the basis of "first come, first served" and one person could apply for as many as wanted, if his application was countersigned by the manager. Course II applied for sixty odd seats and the members relieved each other in the line from one o'clock one afternoon until eight the next morning. Course X followed our example, and so did a number of fraternities. We got the first choice of seats, but those left out on the deal made such a fuss, that that system of allotting seats had to be abandoned the next year. An instructor asked to come in on the deal, and, when he received his two tickets from our allotment, was very much put out to find that there was an aisle between his two seats. He did not happen to be one of the popular profs., that was all.

Professor Swain gave me one of the best knockouts I ever had. I did a problem for him at the board and every time he butted in to ask why I was doing this, or that, I had an answer for him. When I finished he turned to the class and said, "Mr. Rockwood has done very well. There is only one fault with what he has done. It is entirely wrong." I wonder how many remember the way Dmitri Benjamin Barry used to slide across the floor at Tech Show rehearsals?

From Carle Hayward:

As one of those who complained of the lack of '04 news in the last REVIEW, I suppose I must reply to the promptings of the secretary for contributions to the reminiscence number.

I haven't recovered yet from the bump I received on landing as a freshman on Rogers steps after the lordly experience of high school senior. Do all freshmen feel the same?

I heard recently of the death of Professor Dippold and it brought a flood of reminiscences to mind and I have wondered where his friend, Charles Louis Napoleon Bernard, is to be found. I rather enjoyed Dippy's classes, but somehow I never shed any tears over the frequent cuts we received. I used to be an early bird in the freshman drawing room occasionally but I was never able to beat Wilder. I accused him once of staying there all night, but he wouldn't admit it. My principal recollections of the second year are of a lot of hard work. One bright spot was surveying which took us out of doors some. I recall the pacing survey at Bigelow Hill when the distraction of feminine beauty in a house we passed caused every man in the squad to lose count of the number of steps.

In the third year I spent all of my spare time in the chem. lab., the lunch hour being always spent with a beaker in one hand and a sandwich in the other. The miners were supposed to be of such superior ability that they were expected to do the same amount of work as the chemists but in less assigned time. Trowbridge always came supplied with animal crackers and I frequently joined him in eating an elephant or a camel.

Many things might be said of the senior year, especially of the happenings during the two days a week we had for thesis. There was much good fellowship combined with hard work in the laboratory, but space will not permit of expanding on the human interest stories that might be written of those good old days.

From "Mert" Emerson:

My principal remembrance of Seniors Day at Tech, when I received my long-desired degree, is that within an hour of the time of the ceremony Bernie Blum and I were in the carpenter shop engaged in covering with black paint a large sized coffin, in which on the following day at the Nantasket Stunts our class was to bury the class of 1903. Bernie wore, as the usual custom, the regulation frock coat and high hat, etc. I had on an ordinary sack suit because I did not have glad rags like Bernie in my repertoire. I, therefore, think Bernie looked more ridiculous than I did. At any rate, the coffin was well painted.

From Charlie Stebbins:

Do you recall amongst those real live German recitations conducted by our old friend "Blacky" (when You were Mr. Stevens No. 1 or No. 2, I forget which now) one of the days when little fat O'Leary came to class late and was heralded by Blacky through the closed door? On this occasion O'Leary was called upon, shortly after arrival, at one of those opportune places in translation that Blacky knew so well how to choose.

Years ahead of the times in matters of preparedness O'Leary waded in boldly on one of his weird but fluent versions. Suddenly, without warning, the great disappearing atlas attached to the ceiling directly over Blacky's head let go. It spun round and round flapping against the ceiling to the great amusement of all present.

Blacky as ever was equal to the occasion. Coming forward on tiptoe to the edge of the platform, head cocked to one side, fore-finger raised, one eye fixed on O'Leary, the other on the class, he began in most serious tones, "Aha, meester O'Leary! You see! Even zee very heavens protest."

I believe that little incident will remain fresh in memory as long as I live.

From Walter Whitmore:

I suppose there were a great many humorous incidents that occurred when I was in the 'Stute, but that was a long time ago, and when I look back it seems to me that I spent the first half of each year worrying about the midyear exams., and the last half of each year worrying about the finals, and a troubled mind is not over-receptive to humor.

The most pitiful thing that I remember was the semi-occasional, but all-too-frequent, oral test in third year theoretical electricity, pulled off by Harry Clifford in order to discover how much the class was absorbing from his lectures.

An incident that seems amusing to me, now, happened at the beginning of the freshman year. I was presented with an M. I. T. uniform by a friend. This uniform had been handed down from one man to another for many years, I should imagine, for, when the sun's rays rested upon it, its gray appearance was very noticeable. In a dark corner, however, it wasn't so bad, and I guess my appearance was as military and soldier-like as the average. Unfortunately the uniform had to be inspected by the drill-master. I watched him inspect several in the light, that is, near a window. I stayed in the background, for I wasn't particularly interested in that sort of inspection. A little later he was called, for some reason or other, to one of those dark corners in the Irvington Street Armory. I most broke my leg running over to him, for I saw my opportunity had come. He accepted the uniform, for how could he do otherwise? He couldn't tell whether it was gray, blue, green or pink.

I was very much elated, and began to slap myself on the back for being so keen, but this is not the end of the story. He announced some time later that he had lost the names of all those whose uniforms he had inspected on that particular day, which meant another inspection. I waited in vain the next drill day for dark corner inspections, but there was nothing doing, so in desperation I persuaded our captain that considerable time would be saved if he gave the drill-master the names of those in his company who had already been through the ordeal. As I was in a shadow at the time, he fell for it all right.

This is nothing but a lot of hot air, Harry, but my conscience feels better than though I hadn't sent anything.

In order that the secretary may not be thought to shirk the responsibilities of his position entirely, he will now reminisce a little himself, in the first person:

Any mention of "Blackie" cannot fail to bring to the mind of any man, who ever had the pleasure of attending his classes, a dozen memories of Blackie's ready adaptability to circumstances.

I remember a morning when Proudfoot came late, like O'Leary.

Proudfoot entered with carelessness and abandon. His progress to his seat was accompanied by the time-honored custom of foot beats on the floor, by all members of the class seated behind the front row. Blackie peered at the class, through his shaggy eyebrows, and then remarked, "A haaaaa! I see we have ze proud-feet wiz us zis morning."

Another occurrence I shall always remember was pulled off by George Fairfield, Fred Dow and Gus Hill. It was on one of those warm spring days, when everyone ate his lunch in the Tech Lunch (then in the basement of Pierce) as fast as possible and then congregated on the rail fence along the vacant lot in the rear of the old art museum, ready for anything that might happen. On this occasion Fairfield and Dow were sitting on the fence, and Hill was leaning out of the window of the civil engineering drawing room, on the top floor of Eng. B.

Fairfield suddenly decided he wanted his drawing instruments and accordingly shouted to Hill, to throw them down to him. Hill, whom nothing ever phased, prepared to comply, when Fairfield halted him with a loud, "Wait." He and Dow proceeded to acquire a horse blanket from an express wagon standing near. This they held between them, after the manner of a firemen's landing net. "Let 'em come," shouted Fairfield. Down came the drawing case, and I can see Fairfield and Dow now, as they dodged back and forth, trying to get the blanket under the case. They did not succeed and the case missed the blanket by about two feet, landed on the asphalt paving with a resounding crash. However, the instruments were not damaged very much.

Speaking of the Tech Lunch brings to my mind my first experience there. I went in, sat down at a table, and waited about fifteen minutes for someone to take my order. I soon learned the ropes, however, and enjoyed eating there immensely as it was certain many fellows would be met there every day. The Tech Lunch was the fore-runner of the Union and filled a great want of the student-body in more than one sense.

One thought of my undergraduate days leads to another, and it would be only too easy to go on and on, bringing up event after event, each one of which brings back some classmate, many of whom I have not seen or heard from since I received my "sheep-skin." No doubt all of us can say the same, and as we call the old scenes back to our minds, the thought comes to us, "How much I would like to see the old crowd again."

Now we have a good opportunity to fulfill this wish at the coming Reunion. Keep the thought of these reminiscences with you, think how fine it will be to get together and say, "Do you remember the time —?" And "Will you ever forget —?" Then make up your mind you will be at the Reunion and COME. You will never regret your decision.

1905.

GROSVENOR D'W. MARCY, *Sec.*, 246 Summer Street, Boston, Mass.
CHARLES W. HAWKES, *Asst. Sec.*, 246 Summer Street, Boston,
Mass.

Less than three months remain before the greatest reunion Technology has ever had. This word greatest is used advisedly, for after listening to Ike Litchfield for an hour or two, while he related what he called a "brief" description of events, there is certainly going to be some excitement in Boston next June.

It is not going to be limited to Boston either, for by this time you have received the '05 *Flivver* announcing the fact that our class is to hold its special outing at the Vesper Island Country Club, Lowell. There is no need of going into details about this camp, for you have already received them in the *Flivver*. Those who went to Newburyport in 1909, don't need a second invitation to go to Lowell, and those who go to Lowell in 1916, will wish that the big Reunion came every year. Remember June is almost here. Plan to be with us and please answer all notices promptly, both those which are sent by the general alumni committee and also those sent by your secretary.

Norman Lombard was in Boston a few weeks ago, and although he was here but a very short time, he called upon the secretary, and we had a short but mighty interesting talk. Norman is planning to be with us next June.—Reports from all class secretaries indicate that we are to have a record crowd at the Reunion. Conservative estimates place the number at 4,000. Remember, if '05 is to keep its record, we must have every man here who can possibly make it, not just those who can come conveniently, but every single one who *can* come.

George Jones writes from Chicago under date of March 13, as follows:

The Reunion plans sound first rate. I have just returned from Washington where I saw quite a number of Tech men. In fact, night before last, I engaged in a game of Kelly pool at the University Club, in which three '05 men were involved: Robert Morse, Paul Blair and myself. Robert Morse resigns from the Patent Office today, and is starting in practice with Foster, Freeman, Watson & Coit.

FISHER CHEMICAL CO.
Dyestuffs-Chemicals-Oils-Extracts
93 Broad Street
Boston

The above business card has in the corner, "Andrew Fisher, Jr." Andy Fisher is in the chemical business now in dead earnest. Look out for him. Speaking seriously, Andy can give any of us some mighty valuable information in the chemical line, as he has had an opportunity to obtain an unusual practical education while with the Amoskeag Mfg. Company, and has also had large experience as salesman for several chemical concerns.

J. A. Pitts writes from Johannesburg under date of November 24, as follows:

The war is the one subject of conversation here. When the rebellion broke out, I joined the army as a sergeant, and drove a motor car, carrying troops, chasing the rebels and Germans. We were much too strong for them, and consequently there was very little fighting. All the Germans and rebels in German South West Africa surrendered months ago. I retired to civilian life again. Then when the news of the sinking of the *Lusitania* came, there was more trouble. There was close to a million dollars worth of damage done in Johannesburg alone. In fact, Johannesburg is "some town." During the last three years martial law has been declared three times, and I have been a special constable four times.

Just at present, we are in the midst of a big recruiting scheme to raise 10,000 men to clean up German East Africa, and it looks as if they would get them in two or three days. I am going to leave it out this time.

Next month, I am leaving in my motor car for Messina Copper Mine, which is about 500 miles north of here. I am taking a well-known big game hunter with me, and he will probably find some lions, as they are very plentiful up there. Personally, I haven't lost any lions.

I am still in my old position as manager of the oil department, and the work is certainly very interesting and varied. Give my regards to any of the boys who know me.

Ronan Grady, who is now lieutenant, was commander of the submarine K-5 which caused everyone so much anxiety early in February. Grady was with us for about one year, receiving an appointment to Annapolis in 1902. At the academy he was president of his class. As midshipman, he was sent to Alexandria and after a year, was transferred to the U. S. S. *Pennsylvania* as ensign. He was then given command of the torpedo boat *Perkins* as lieutenant, and was later detailed to the Bath Iron Works as inspector. —Here's a short note recently received from Harry Whitney.

I have just returned from a four weeks' trip through Mexico. It is a sad sight to travel through that country and one can see nothing but disease and starvation; 500 deaths a day in Mexico City alone.

Very little transportation, finance all shot to pieces and all the so-called government officers stuffing their pockets with graft money, while "ole man Carranza" is riding about the country in his private car, deer hunting and rabbit shooting.

Conditions have never been known to be so bad as at present, and there is no immediate relief in sight.

F. V. Johansson is with the Jewett Piano Company, Leominster, Mass. He writes that he will probably be with us in June.—Chester Allen is professor of civil engineering at Penn. College, Gettysburg, Pa. He writes that in all probability he will be on hand for the Reunion, for there are comparatively few of the '05 men whom he has seen since graduation.—Roy Allen is manager of the Sierra Plata Mining Co. and the Coralbut Mining Company of Joplin, Mo. Roy has been at Joplin since last September, and writes us:

Living and working conditions are much more satisfactory than in Mexico. I am just completing a mill to treat 400 tons of ore per day, and am about to start work on another property, developing the mine and building a mill to handle 800 tons of ore per day. Mining business here is good now, and I believe that this is as busy a district as any in the country.

—The *Boston Globe* of March 18 prints the following:

On Thursday, March 22, C. E. Atwood, '05, will speak to Tech men at the Union on "Jobs in South America." Mr. Atwood, since his graduation, has been in South America in charge of installation work in the nitrate region of Chile. He possesses an intimate knowledge of the engineering conditions of that country. He will first discuss the work he has been in, and then he will tell of the methods of applying for work in this country. This is the first of a series of lectures under the auspices of the Technology Christian Association dealing with engineering conditions in foreign countries.

Charlie Clapp writes that he is endeavoring to find excitement by trying to become a military aviator. He mentions casually that his present position makes it necessary for him to pilot a "Ford" among the mountains of Arizona, and speaks as though there might be some considerable excitement connected with this.

If any men have not received a copy of the '05 *Flivver* please write the secretary at once. Don't forget that the columns in our illustrious *Flivver* are open for contributions. '05 is going to have a record attendance at the Reunion, and the record will be a higher one if you do your part.

The Ten Year Book is coming along in good shape, but there are still many information blanks coming in with incomplete data. When the book comes out, any man will be sorry to see a page broken up on account of no information as to activities during the last ten years. Our blanks are short, and there is no satisfaction in receiving a blank with the comment that they have not the time to give us a dozen lines of information.—Myron E. Helpers announces the birth of a boy, born January 14; 9 pounds, 4 ounces, —going some.—Frank Langworthy announces the arrival of Nelson Erwin Langworthy, born February 21.

JAMES HARVEY PAYNE.

It is with deep regret that we announce the death of James Harvey Payne. He was at the University Hospital in Baltimore, and died January 26 of Bright's disease. Payne had been with the Eastman Kodak Company, the Texas Portland Cement Co., Security Cement & Lime Co., Virginia Portland Cement Co., the Jamestown Portland Cement Company and with the Braden Copper Company of Chili. For the past year, he had given much of his time to independent consulting work. He was a recognized specialist in the use of rotary furnaces and had designed plants for reburning lime waste, nodulizing pyrites cinder, agglomerating copper flue dust, etc. At the time of his death, he was particularly interested in the manufacture of barytes compounds. He was a young chemical engineer of great promise, as well as a kind and genial gentleman. He is survived by a widow and three small sons. W. G. Bent writes from Rochester, giving us data regarding Payne. His letter is full of just the kind of feeling we all had for Jimmy Payne when he was at the Stute.

1906.

C. F. W. WETTERER, *Sec.*, 147 Milk Street, Boston, Mass.
JAMES W. KIDDER, *Asst. Sec.*, 50 Oliver Street, Boston, Mass.

Mark your calendar now. Yes, that's right,—Monday, Tuesday and Wednesday, June 12, 13 and 14. The biggest Reunion ever and the Dedication. You'll be mighty sorry if you miss them, so get your duds together and come on. Also it's the tenth anniversary for the class. We want to make the biggest kind of a showing at the Reunion and there's going to be a class dinner Monday, June 12, at 6.00 p. m. To date replies to our first class notice number 153, with 74 saying they are coming and 31 more doubtful. If you haven't done so, send in your reply at once and make up your mind to come.

We are all mighty thankful that Tommy Holmes escaped death on January 10 in Mexico when Villa bandits held up a train load of American mining men near Chihuahua, killing 19 persons, of whom 17 were Americans. His miraculous escape was given wide publicity in the daily press but a repetition of his story as given to the papers at that time will not be amiss:

Our train left Chihuahua City Monday morning, January 10, at about 11 o'clock. The train was stopped at or about the ranch Baeza, a point about five miles west of Santa Ysabel, between 1.30 and 2 o'clock that afternoon. While the train was standing at the station of Santa Ysabel, two armed Mexicans rode by and scrutinized the train. The Mexican passengers at Santa Ysabel told me afterward that the riders had inquired if there were any soldiers on the train. At the point of the massacre our train was stopped in a cut, so that the last car was just inside of the cut. We were stopped by another train, the front trucks of one of the coal cars of which was seen to be off the track. This was the first we knew of a train preceding us. There was nobody to be seen around the train in front. When our train was stopped, Newman and I were sitting together, and Evans came up and looked out of our window. Evans, Newman, Machatton and I then got off the train. Watson was either getting off or about to do so, behind us, when I looked back and saw him.

Just after alighting I heard a volley of rifle shots from a point on the other side of the cut and just above the train. Looking around I could see a bunch of about twelve or fifteen men standing in a solid line, shoulder to shoulder, shooting directly at us. They were fifty or seventy-five feet away. The coach cut off my view so I could not see how many bandits there were. The depth of the cut on the other side near Santa Ysabel river at that point was about two feet. On the other side it was much greater. To the rear of the train was an embankment declining toward the river. Watson, after getting off, ran towards the river. Machatton and I followed. Machatton fell. I do not know whether he was killed then or tripped. Watson kept running and they were still shooting at him when I turned and ran down grade where I fell in some brush, probably 100 feet from the rear of the train.

I lay there perfectly quiet and looked around and could see the Mexicans shooting in the direction in which Watson was running. I saw that they were not shooting at me, and, thinking they believed me already dead, I took a chance and crawled into some thicker bushes. I crawled through the bushes until I reached the bank of the stream. I then made my way to a point probably 100 yards from the train. There I lay under the bank for half an hour and heard shots by ones, twos and threes. I did not hear any sort of groans or yells or cries from our Americans.

Then I continued farther under the bank, wading the stream part of the time until I reached a point probably 200 yards from the train. There I remained half or three-quarters of an hour. Later after going to several ranches and picking my

way cautiously for several miles I met with an unknown Mexican who directed me to Chihuahua City. I reached Chihuahua City Tuesday morning at about 7.30. The foregoing facts are of my personal knowledge.

For some time past T. L. Hinckley has been director of the Citizens Bureau of Municipal Efficiency at Milwaukee. The secretary recently received a folder describing the work done, doing and planned, and a wide field of activity has been followed. Modern budget, accounting and efficiency methods have been brought about in a great many of the city departments. The schools, fire department, pavement problems, financing public improvements and street lighting have been reported on. Nineteen newspaper articles with regard to various civic matters have appeared and plans are now under way for improving the methods and efficiency of a great many of the other city departments.—We all remember Keleher as being well posted on Spanish, and it may be that this is one of the things which led him to get into the South American business. A recent letter from him contains the following interesting information:

Of course I have continued to stick to the South American business because I have great faith in that section of the world.

As the years go by, I have no wife or children to show for my efforts, but I am progressing in other respects. Naturally I am quite a native now in the Spanish and Portuguese lingo.

I had the usual rocky road that a fellow has when he starts in business for himself. Three years ago I started. The first two were trying, but I did very well last year, so much so that I have now opened a permanent New York office which I confidently expect will grow and grow. My sales specialty is electrical supplies, and I have the exclusive selling agency for ten lines. Besides this I am on the staff of the *Electrical World* for the South American edition that they will get out April 1. Modesty should prevent, but I am told that the credit for the launching of this new publication is mine.

I am also doing some work for the Pierce-Arrow people this year.

I sail for Brazil February 19. As my trips usually last seven months, I regret that I cannot possibly attend the Reunion. This, however, is one of the greatest regrets of my life, because I have great affection for the class of 1906, and I would like to take my part in the making of the 1906 part of the Reunion a great success.

—Edward M. Eliot is now located in St. Louis. For ten years he was in central station work but in the early part of 1916 he went with Percival & Jones, efficiency engineers, 1604 Burlington Building, St. Louis.—F. J. Van Hook is located in New Orleans with the Jefferson Construction Company, one of the largest contractors and engineers in the South. Van writes that he likes his work immensely and that he may get on to the Reunion.—Charles Saville who has already been mentioned in these notes as director of sanitation at Dallas, Texas, had a long article in the *Dallas Morning News* of January 1 with regard to the activity of the Public Health Department in Dallas. A two-column editorial also appears in *Engineering News* of March 9 in connection with his work, and says:

Altogether, the work accomplished in the first year of its existence by the new Dallas department of public health is a fine example of what technically trained sanitary engineers may accomplish in public-health work.

James G. Walker, Jr. was married January 20, according to the following article from the *Boston Transcript*:

At the marriage of Miss Amy G. Littlehale, daughter of Mrs. Lucy B. Littlehale of 63 Cushing avenue, Dorchester, to James G. Walker, Jr., of San Francisco, at the bride's home, Rev. Clifton J. Taft, minister of the Central Congregational Church of Dorchester, officiated.

The bride is descended from early settlers in Massachusetts, who came over in the *Mary and John*, in 1630, and landed at the foot of Savin Hill, not far from her present home. Miss Littlehale has been an enthusiastic autoist and among her wedding gifts was an automobile from the bridegroom.

Mr. Walker, after a course at the Massachusetts Institute of Technology, went West. He was graduated from Boston University Law School in 1908 and is a member of the bar in California and Oregon. Both Mr. and Mrs. Walker have crossed the continent many times. They met on one of the trips. Following an auto tour in the Bahamas, the Southern States and up the Pacific coast from Los Angeles, they will make their home in Portland, Ore. They expect to reach that city about June 1.

H. S. Hubbell is now general manager for August Mietz, manufacturer of oil engines with headquarters at 128-138 Mott street, New York.—Percy Tillson was recently in Boston getting recruits from the Institute for the Bell Telephone Company of Philadelphia. Remembering with what awe we looked upon similar visits in undergraduate days, we venture a guess that Tillson is cutting some swath.—At the alumni banquet held at the Copley Plaza, Boston, on Saturday, January 8, five 1906 men were present, as follows: Kerr, Carter, Chandler, Wight and Wetterer.

The *Engineering Record* gives us the following item of interest:

Samuel A. Greeley has opened an office for practice as hydraulic and sanitary engineer, at 64 West Randolph street, Chicago. He was graduated from Harvard University in 1903 and later took a degree in sanitary engineering at the Massachusetts Institute of Technology. For five years, until 1910, he was employed as assistant engineer with Rudolph Hering and George W. Fuller, working on the design and construction of works for sewerage, sewage disposal, water purification and refuse disposal, and on waterworks valuations. For three years previous to 1911 he was engaged on the construction and operation of the refuse incinerator at Milwaukee, which has a rated capacity of 300 tons per day. Mr. Greeley had charge of the operation for a year and a quarter. From 1911 to 1915 he was assistant engineer with the Sanitary District of Chicago, on investigations, designs and construction of sewers and sewage treatment plants. Mr. Greeley has made two trips to Europe, investigating and reporting upon the practice of sanitary engineering abroad, and made a trip to Caracas, Venezuela, to investigate sanitary conditions. In a private capacity, he has made many reports and plans for work for water supply, sewerage, sewage disposal and refuse disposal.

Kidder has also collected considerable news in connection with the campaign for arousing class interest, which we have started through course representatives and contributes the following:

The assistant secretary has not been a frequent contributor to the REVIEW, but fearing the reticence of the secretary will not permit him to do justice to the occasion the former writes to announce the arrival of Charles Stanley Wetterer on February 10, weight 7½ pounds. I am sure the whole class is with me in congratulating Wetterer on the event.

The following men showed up at the dinner held at the Boston City Club on March 10: Batchelder, Carter, Chandler, Clarke, Farley, Ginsburg, Guernsey, Hopkins, Johnson, Kasson, Kerr, Kidder, Nash, Norton, Rose, Rowe, Sherman, Taylor, Tucker, Wetterer, Wight, Wood.

At the conclusion of the repast the secretary submitted a summary of the Reunion Plans up to date with particular reference to the stunt. All appeared to be very much interested and many valuable suggestions were offered. The general discussion had to be shortened on account of a date with the manager of a neighboring bowling alley. About sixteen of the men took part in the bowling. No regular contest was arranged but an irregular one developed between teams made up of Carter, Hopkins, Ginsburg and Kidder and Tucker, Rose, Rowe and Norton. The latter team won the first string by a good margin, but on the second game Ginsburg developed a "fadeaway," which with a high string that modesty forbids the author to say much about, buried the Professor's team so completely that it was thought better to postpone the rubber game until they could be excavated.

The secretaries were more than pleased to see the way the men turned out for the dinner and the interest shown in the Reunion and the stunt indicated great things from 1906 next June.

It is planned to have similar gatherings before the Reunion and more of the men should plan to attend the next one. There are enough of 1906 men in Boston and vicinity to have fifty or sixty men at these dinners.

The plan of having course representatives, as outlined in the January number of the REVIEW, has worked out very well. Up to the present time seventeen of the twenty men who were designated for these positions have expressed their willingness to act as representatives.

We note the marriage of Edwin Bartlett in the *Boston Globe* under date of March 25:

A wedding took place today at the home of Dr. and Mrs. Chandler Robbins. Miss Julia R. Foster of Cincinnati, sister of Mrs. Robbins, was married to Edwin B. Bartlett of Milwaukee. The ceremony, which was witnessed only by the immediate friends of the couple, was performed by Rev. Frederick Reeves.

Miss Margaret Sargent of Boston was bridesmaid and the brother of the bridegroom was best man. The bride graduated from the Farrington School and Mr. Bartlett from Wisconsin University and Massachusetts Institute of Technology. He is a prominent golfer and has won many prizes in competition. After a trip Mr. and Mrs. Bartlett will reside in Milwaukee.

George Hobson, who is one of the representatives for Course I, has just submitted a very interesting batch of letters, which he received from the men on his list. The following are extracts from some of the letters.

E. D. McCain, who is farming in Frederick, Md., writes as follows:

I knocked about all over the country for the first seven or eight years out of Tech, and then a couple of years ago settled down here. Have about one hundred acres of apple and peach orchards to look after and it takes most of my time. Did take time off about two months ago to get married to one of the Maryland girls.

Congratulations Ed.—From Ralph H. Burke we have as follows:

As far as my work is concerned I recently left the Sanitary District of Chicago where I have been employed for the past ten years and I am taking charge of the work on the Illinois Waterway.

A long letter from Norman P. Gerhard mentioned several of the men. For the past six months Gerhard has been working on the Catskill Water System with Howard Barnes. He writes as follows:

Howard Barnes is still with the Board of Water Supply and has lately put in considerable time on the final estimate for the Hill View Reservoir, part of the Catskill Water System. Paul Mack left about January 1 for the Philippines. He has a very good offer from the Department of Public Works.

—A. L. Sherman has now associated himself with Edward A. May, a civil engineer and surveyor at Patchogue, Long Island, N. Y.—G. W. Burpee, who is with Westinghouse, Church, Kerr & Co., writes that they are very busy at present and that he cannot tell now about being in Boston next June.—J. E. Griffin, who is in Philadelphia with the American Agricultural Chemical Company, is in the same predicament as Burpee, as June is a bad time of the year for him to get away.—In the *Boston Herald* of January 25 mention is made of Dan Kelly and John Monahan, who are in the service of the city, as being among the fortunate ones to be promoted by the mayor. Kelly, who has been assistant engineer in the sewer service, is now district engineer in the water service and Monahan, who held a position similar to Kelly in the sewer service has been made district engineer of that service. Keep up the good work boys and thanks for the portions of the salary increases which were devoted to 1906.—About the first of the year E. R. Hyde, who has been doing highway construction work in Massachusetts and New York left for the Philippines where it is understood he has a Government position in his line.—Harry J. Armstrong, VI, who is running a chicken farm in Loch Raven, Md., has written to Tillson, one of the representatives for Course VI, as follows:

Your letter about the '06 Reunion came this morning. Will try my best to be on hand if time and money permit. I am married now and have two children. Gave up engineering six years ago and took to chicken farming.

Tillson has also sent in other letters which he has received in connection with his activities as one of the course representatives. H. W. Key writes him from Atlanta as follows:

With reference to the All-Tech Reunion next June, will say that nothing will please me more than to be present at the celebration of 1906's Tenth Birthday. However, I very much doubt being able to attend, but will be unable to say definitely until a later date.

Since leaving Tech I have been with the G. E. Co.—two years in Schenectady,

one in New Orleans, La., and the balance here. I also am single but, unlike you and Deane, am afraid there is no chance. My old pal, Woodruff, when last heard from was designing transformers for the Allis-Chalmers Co. in Milwaukee. If he can design as well as he used to handle some of Harry Clifford's stuff, he is doubtless making the A.-C. Co. a very valuable man.

Also O. B. Blackwell, who is with the American Telephone & Telegraph Co. at 15 Dey street, New York, says:

I expect to go up on the special boat the Sunday before but shall probably be able to stay for only Monday. Sorry I have no special news for the REVIEW. I am just plugging along as usual.

Tillson adds that Blackwell is very modest when he makes the statement that he is "just plugging along," because it is a fact that Blackwell really has been going some and is one of the top-notchers in the Telephone Company's engineering and research work. Another one of Tillson's letters is from D. C. Davis, who is now with the Westinghouse Electric & Manufacturing Co. at East Pittsburgh, Pa.:

I was in Philadelphia last summer and dropped in to see you, but Brierly was the only one I recognized. I had quite a love chat with him.

My son is now nearly five years old and in addition there is a daughter who will be a year old in March, so you see we have a well-balanced little family.

I stayed in the Patent Office nearly seven years, in the meantime studying law and spending the last three years of the time in charge of incandescent lamps and vapor rectifiers, which, if you remember, was one of my specialties in Philadelphia. The Westinghouse Company has energetically taken up the development of the large metal case rectifier as a substitute for the rotary converter, and it was primarily to cover their advance along this line that I came here in January, 1914. Since then I have picked up a few additional lines so that I am now in charge of the patent work on dynamo-electric machinery, which keeps me and my assistant well occupied.

Aside from the above I have little to write about in the line of activities. I fill in three nights a week teaching mathematics at the Carnegie Institute of Technology, incidentally learning more about trig., college algebra, analytics and calculus than I ever dreamed of at Boston.

I have been following Blackwell's progress quite closely as he has been active along patent lines and I keep tabs on patents of that character.

I have been planning for some weeks to get to Boston in June as "Ike" Litchfield was here last fall and aroused a lot of enthusiasm in the new buildings, and I shall hope to see you there. I will write to Kidder shortly and give him a few brief notes on my career, such as it is.

It is with deep regret that we have to announce the death of three 1906 men within the last few months, as follows:

On December 5, J. J. Cartagena of San Germaine, Porto Rico.

On February 12, George W. Upham of Bellows Falls, Vt. Upham had been a cripple from childhood and while at the Institute had a physical breakdown which became so serious as to preclude his returning. For the last six years he has been confined to a hospital.

On February 9, James Rice Williams, at Quincy, Ill., from a general breakdown in health which started in January, 1910. From 1906 to 1908 Williams was assistant general manager of the Quincy Engine Works and from 1908 to 1910 general superintendent of the J. R. Little Metal Wheel Company at Quincy.

It is also with deep regret that we have learned of the death of Mr. William C. Andrews of East Orange, N. J., husband of Miss Mary J. Ruggles of the class of 1906.

The following address changes have been received:

Harry J. Armstrong, R. F. D. No. 6, Loch Raven, Md.—Ralph H. Burke, I, Illinois Water-Way Commission, 1104 State Bldg., Chicago, Ill.—Leon E. Hirt, 224 West Second St., Tulsa, Okla.—Charles A. Howard, 196 East Front St., Red Bank, N. J.—Edward R. Hyde, I, General Delivery, Manila, P. I.—Gilman B. Joslin, Canadian Fire Underwriters Association, Excelsior Life Bldg., Toronto, Ontario.—Ralph D. Kelley, 102 East College St., Aurora, Mo.—Fay W. Libbey, 1150 Mignonette St., Los Angeles, Cal.—William Neilson, 1002 First National Bank Bldg., San Francisco, Cal.—A. L. Sherman, I, care of Edw. A. May, Civil Engineer and Surveyor, Patchogue, L. I., N. Y.—Percy E. Tillson, 1631 Arch St., Philadelphia, Pa.—James L. Wick, Jr., 27 Lauderdale, Youngstown, Ohio.—Sylvester C. Wolfe, care of Lockwood, Greene & Co., First National Bank Bldg., Boston, Mass.

1907.

BRYANT NICHOLS, *Sec.*, 10 Grand View Road, Chelsea, Mass.
HAROLD S. WONSON, *Asst. Sec.*, Waban, Mass.

More '07 men will be in Boston and vicinity between June 9 and June 14 than have been there since June, 1907. That is an assured fact. The point with you is just this:—Are you going to be there? We are hearing every week of men who are coming from North and South and West to be present at the Dedication Reunion and at the '07 tenth anniversary (observed one year in advance). We have scouts in various big cities of the country who will keep after the '07 men near them by all kinds of literature and personal appeals. We shall begin sending letters from Boston as soon as we have some definite plans made for our class affair. Just at present the committee:—Macomber, Lawrence Allen, Wonson, Lamont, and Bryant Nichols, are trying to find a suitable place for our class festivities. The same committee has general charge of all plans for the class part in the big Reunion. The committee has many projects in mind for the comfort, happiness, good time, and inspiration of all '07 men, but just now nothing can be announced. However, you know the dates. You know that if you are in Boston then you will have a part in the greatest college celebration ever known in the world. You know that you can renew fellowship with classmates under circumstances which will be ideal. Isn't this a great prospect! Then make your plans now to come.

Notes about '07 men this time consist mostly of new addresses. Do you realize that if you who read this would write the secretary a letter about your work and experiences he would have more

material than he could use in one number of the REVIEW? Letters are interesting: address changes are not. Please help to make the next set of notes interesting. H. B. Alvord is at 8 Beacon St., Boston.—Charles E. Baker, Eastern Dredging Co., 172 Condor St., East Boston, Mass.—W. W. Bigelow is living at Tech Chambers, Boston. He is consulting engineer with W. F. Kearns Co., contractors, of Boston.—A. Shirley Black, 18 Central Ave., Lynn, Mass.—George H. Bryant, 625 Kirkwood Boulevard, Davenport, Iowa.—B. F. Carter, Pacific Gas & Electric Co., Phoenix, Ariz.—A. H. Cenedella, 58 Fruit St., Milford, Mass.—E. R. Cowen, 2013 Woodbourne Ave., Louisville, Ky.—Harry R. Crohurst, United States Health Service, Cincinnati, Ohio.—A. R. Cullimore, 2115 Putnam St., Toledo, Ohio.—Charles A. Eaton, 62 Taylor St., Waltham, Mass.—Harry A. Frame, Oilton, Okla.—Louis A. Freedman, care of American Ever-Ready Works, 304 Hudson St., New York City.—James M. Gaylord, 412 Tramway Bldg., Denver, Colo.—Albert E. Greene, 504 West Highland Drive, Seattle, Wash.—George A. Griffin, Municipal Bldg., New York, N. Y.—B. C. Gupta, Civil Engineering College, Sibpur, Howrah, India.—Harry R. Hall, 16 West Saratoga St., Baltimore, Md.—Prof. H. B. Hastings, 1340 East 32d St., Portland, Ore.—J. P. Hinckley, 193 Shelton Ave., Jamaica, Long Island, N. Y.—Charles M. Hutchins, 174 Warren Ave., Brockton, Mass.—Arthur R. Jealous, 254 Mt. Pleasant Ave., Newark, N. J.—Ralph G. Kann, Buffalo Attica Arcade R. R. Co., Arcade, N. Y.—Capt. Samuel A. Kephart, Fort Williams, Maine.—Ralph F. Knight, 16 Hale St., Beverly, Mass.—Edward G. Lee, Room 40, Journal Bldg., Lewiston, Maine.—Roy W. Lindsay, 179 Parkside Ave., Buffalo, N. Y.—John H. Link, 125 Worth St., New York City.—B. P. Luce, care of Fajardo Sugar Co., Fajardo, Porto Rico.—H. H. McChesney, 749 Euclid Ave., Syracuse, N. Y.—H. C. McRae, 3413 Piedmont Ave., Baltimore, Md.—H. W. Mahr, 127 Worth St., New York City.—A. P. Mansfield, 400 Salem St., South Lynnfield, Mass.—W. H. Martin, Chile Exploration Co., Chuquicamata, Chile.—N. A. Middleton, 1081 East Jersey St., Elizabeth, N. J.—William D. Milne, Phoenix Insurance Co., Hartford, Conn.—G. A. Murfey, The Browning Co., Cleveland, Ohio.—H. G. Pastoriza is with Perry, Coffin & Burr, bankers, in New York City.—Robert Rand, care of Corrugated Bar Co., 220 Devonshire Co., Boston.—W. P. Rayner, 1800 Kenyon St., N. W., Washington, D. C.—E. C. Richardson, 138 Inspector St., Montreal, Quebec.—T. W. Roby, Seaboard Air Line Ry., Norfolk, Va.—S. E. Rockwell, 2332 North 62d St., Seattle, Wash.—L. P. Russell, Richmond, Mass.—B. K. Sharp, 29 Broadway, New York.—Frank B. Shields, Fletcher Trust Bldg., Indianapolis, Ind.—T. L. Smith, 2019 Hanover Ave., Richmond, Va.—E. B. Snow, Jr., 207 Pilgrim Ave., Highland Park, Mich.

Clarence D. Howe is engaged to Miss Alice Worcester, daughter of Mr. J. R. Worcester, the contractor, of Boston.—

J. J. Thomas has resigned from the United States Army in which he was a captain, and is chief consulting engineer with the American Can Company in full charge of the manufacture of munitions. John was in the Ordnance Department of the army, and was expecting to go to the Philippines, when he received an offer from the above concern which was so tempting that he accepted. His headquarters are at 120 Broadway, New York City.—W. F. Turnbull was married on January 19, 1916, in New York to Miss Clara L. Kramer of Tuckahoe, N. Y. He is an instructor in Mechanical Engineering at University of Pennsylvania. Address is 3309 Arch St., Philadelphia, Pa.—A. K. Tylee, 4 Hospital St., Montreal, Quebec.—W. G. Waldo, 324 21st St., Nashville, Tenn.—P. B. Webber, 78 Devonshire St., Boston, Mass.—L. C. Whittemore, 700 Karpen Bldg., Chicago, Ill.—H. S. Wilkins, Bancroft Cottage, Andover, Mass.

Extracts from a letter from Stuart R. Miller follow:

I have planned to come to the *Big Doings*. You can count on me for anything that goes on the Big Week. I am keen for getting back to see old Beantown. Have not been back since the last All Tech., which I remember with great pleasure. Enjoyed seeing Arthur Jealous when he was in town a year or so ago. Went out to see Charlie Bragdon a short time ago. H. D. Loring, '07, is in evidence around town in Ferro Concrete work, as is also Morrill of our class in the same company with Loring.

Bob Keyes has left the Ilg Electric Ventilating Co. and is now in charge of the factory heating and ventilating departments of the Sturtevant New York office. His address is 101 Audubon Ave., New York City.

1908.

RUDOLPH B. WEILER, *Sec.*, care The Sharples Separator Co.,
West Chester, Pa.

CHARLES W. WHITMORE, *Asst. Sec.*, care of H. C. Castle, Inc.,
161 Devonshire Street, Boston, Mass.

All Technology Reunion Class Committee, 1908

R. J. Bachelder
L. P. Collins
L. B. Ellis
Lincoln Mayo
H. W. Heath
C. W. Whitmore (*ex officio*)

The above have been appointed to act on all matters pertaining to the class during the All-Technology Reunion next June, and particularly with reference to planning and engineering our class stunt at Nantasket on June 13. The committee are now trying to decide on the best stunt, and as soon as this decision is made it will be sent to the Reunion stunt master for acceptance. Sug-

gestions and help of all kinds are needed as we want our class to go down in history and be able to prove it later on by the moving pictures which will be taken at the time.

Reunion

Have you sent in your reply cards to the annual letter? If not, why not? Don't forget to enclose an iron man: we need the money. Will you be on hand? Thirty-five favorable replies out of fifty-one received up to March 10—Nuf sed.

The regular bi-monthly dinner was held at the Boston City Club on Tuesday evening, January 11. H. R. Sewell was with us, having recently arrived from Texas where he had been since graduation. For five years he had charge of the territory in that district for the Allis-Chalmers Company, and for the last two years he had been in business for himself until the hurricane in the last year cleaned him out. Sewell stated that he had been wanting to get back here for some time and that the storm had fixed it for him. Jim Collins was there with bells on, at least under his belt, and gave us the postponed dissertation on matrimony. As usual, the married men cleaned up the lonesome ones in two straight strings of bowling. Those present:—W. D. Ford, L. Mayo, G. M. Belcher, F. A. Cole, Howard Luther, A. W. Heath, H. L. Carter, L. T. Collins, W. H. Toppan, A. L. Ferrandi, C. E. Manning, H. R. Sewell, R. J. Batchelder, C. W. Whitmore.—The engagement is announced of Miss Marjorie Chapin to R. C. Folsom.—Your secretary announces the arrival of a daughter, Ruth Hilda, on January 8.—Mr. and Mrs. Leo Loeb announce the arrival of Leo Loeb, Jr. February 7 at Glen Ridge, N. J.

FINANCIAL STATEMENT

Balance on hand March 1, 1915.....	\$110.64
Dues received March 1, 1915, to March 1, 1916.....	81.66
Received from Reunion Committee.....	14.50

\$206.80

Expenditures

Annual letter 1915.....	\$39.03
Reunion expense 1915.....	29.00
Mailing expense bi-monthly dinners, postage... ..	22.70
Exchange.....	10
Balance on hand March 1, 1916.....	115.97

\$206.80

The regular annual dinner was held on Tuesday evening, March 14, at the Boston City Club, and it looked like old times again to see the crowd there. Of late the attendance has been rather slim, but from the last showing we trust it will not be necessary, on the

part of the resident secretary, to use strenuous methods to dig the fellows up. The business taken up was as follows:

The announcement of a committee to draw up resolutions on the death of Paul Barrett. This committee consisted of H. T. Gerrish, L. B. Ellis, and A. W. Heath. The resolutions were adopted by the class and are printed in this REVIEW.

The financial statement of the secretary was read and adopted. The balance on hand March 1 showed a gain of a little over \$5 over last year, but this was principally because of the strict economy practised since receipts for dues were considerably less last year than usual. Every fellow was asked to send in his little dollar to help things out as this year will be a pretty expensive year because of the money necessary to spend for a new banner in order to keep up with the rest of the classes, and a considerable amount will have to be spent to develop a proper stunt which we are to pull off at Nantasket on June 13.

The committee to arrange for the class stunt at Nantasket and take care of other class details during the big Reunion was announced as follows: L. T. Collins, R. J. Batchelder, L. B. Ellis, Lincoln Mayo, A. W. Heath, C. W. Whitmore. This committee has already held one meeting and are planning to lose no time in developing a stunt which will put us down in history as *some* class.

The Decoration Committee of the big Reunion has asked all the classes to have new class banners made which will be more distinctive in appearance than the standard banner formerly used. All the classes not having the proper amount of "pep" will use the same old banner, but all the live ones will have new ones and it behooves us to get busy. The following committee was appointed to design and have made a banner worthy of our class: R. J. Batchelder, W. D. Ford, H. B. Luther. It was voted that the cost of this banner should not be over \$30. We felt that this was fairly conservative as some of them are to cost as much as \$50 and possibly more.

After this the meeting adjourned and the fellows all hied to a bowling alley; the single men won two straight strings; we congratulate them.

The following were present at the dinner: L. T. Collins, B. S. Lester, F. A. Cole, R. J. Batchelder, A. B. Appleton, R. E. Manning, H. L. Carter, P. L. Handy, R. J. Joy, Jr., Leslie B. Ellis, H. C. Schriefer, F. T. Towle, A. W. Heath, H. R. Sewell, W. E. Barton, H. S. Chandler, W. D. Ford, C. W. Clark, C. W. Kensington, P. A. Esten, E. I. Wells, Lincoln Mayo, H. B. Luther.

RESOLUTIONS ON THE DEATH OF PAUL BOSWORTH BARRETT

WHEREAS, Almighty God in His infinite wisdom hath removed from our midst another of our classmates, be it

Resolved, That in the death of Paul Bosworth Barrett, the class of 1908 of the Massachusetts Institute of Technology has lost an esteemed and beloved member, always an earnest worker for his Alma Mater.

That a copy of these resolutions be sent to his family with our sincere sympathy in their great loss.

That a page of the records be set aside to his memory and these resolutions spread thereon.

For the Class, HERBERT T. GERRISH,
LESLIE B. ELLIS,
ARNOLD W. HEATH,
Committee.

Just as we go to press word comes of the death of Edward Rymes Hall, II. Hall was experimental engineer for the Good-year Tire & Rubber Company, Akron, Ohio, and was spending a leave of absence at some hot springs in Michigan to overcome an attack of rheumatism. He there contracted pneumonia. Resolutions will be published in the next REVIEW.

From the *Statesman* of March 5, Austin, Texas:

Kuehne, Chasey and Giesecke is the style of a new firm of architects recently formed and opening offices in the Littlefield Building. All three of the young men making up the firm are well-known architects of Austin and their alliance forms one of the strongest architectural combinations in Texas. Hugo F. Kuehne, adjunct professor of architecture in the University of Texas since 1910, is at the head of the firm. He is a member of the Texas Chapter of the American Institute of Architects, received the degree of civil engineer from the University of Texas in 1906, and the degree of bachelor of science in architecture, from the Massachusetts Institute of Technology in 1908. Prior to joining the faculty of the university, he had three years' experience in Boston, including much of the principal work of G. Henri Desmond, who designed the Maine State Capitol Building.

New Addresses

Lawrence H. Allen, 34 Avon Way, Quincy, Mass.—A. B. Babcock, 1217 President St., Brooklyn, N. Y.—Ralph J. Batchelder, 91 Fayerweather St., Cambridge, Mass.—E. Jefts Beede, 123 School St., Belmont, Mass.—George M. Belcher, 5 Culver Court, Naugatuck, Conn.—Donald Bowman, 6633 Woodlawn Ave., Chicago, Ill.—Arthur E. Bremer, 921 Washington St., Hoboken, N. J.—Harry L. Burgess, care of American Tel. & Tel. Co., New York City.—H. Ross Callaway, 151 Post Road, White Plains, N. Y.—Frederick A. Cole, 109 Peterborough St., Boston, Mass.—Herbert A. Cole, Jr., 21 Winter St., Fitchburg, Mass.—L. T. Collins, 78 Madison Ave., Newtonville, Mass.—Hardy Cross, 120 Waterman St., Providence, R. I.—Allston Dana, Battle Hill, White Plains, N. Y.—Stephen Lock Davidson, 1326 North Lawrence Ave., Wichita, Kans.—Myron M. Davis, 244 Parkwood Blvd., Schenectady, N. Y.—Gregory M. Dexter, P. O. Box 164, Wheeling, W. Va.—H. W. Dun, Jr., 174 Chestnut St., Albany, N. Y.—Paul A. Esten, 195 Walnut St., Stoughton, Mass.—G. W. Everett, 79 West Jersey St., Elizabeth, N. J.—A. L. Ferrandi, 14 Milton Ave., Dorchester, Mass.—Winthrop D. Ford, 15 Linnaean St., Cambridge, Mass.—Arthur L. Gardner, 138 Highland Ave., Winchester, Mass.—M. B. Hall, 6115 Washington Ave., St. Louis, Mo.—Allen E. Hazard, 1663 Main St., Campello, Mass.—Robert D. Hennen, Morgantown, W. Va.—A. T. Hinckley, 548 Fifth

St., Niagara Falls, N. Y.—Alfred B. Hunter, 14 Barnard St., Hartford, Conn.—Karl R. Kennison, 9 Phillips St., Providence, R. I.—Arthur A. Longley, 6217 Ingleside Ave., Chicago, Ill.—G. M. Johnstone Mackay, 2 South Brandywine Ave., Schenectady, N. Y.—Lincoln Mayo, 11 Robeson St., Jamaica Plain, Boston, Mass.—Norman C. Nicol, 33 Chapman Ave., Waterbury, Conn.—Leo D. Nix, 626 West Third St., Dubuque, Iowa.—Harold S. Osborne, 514 West 114th St., New York City.—Henry Patten, 203 Savin Hill Ave., Dorchester, Mass.—Charlton D. Putnam, 239 Grafton Ave., Dayton, Ohio.—Miles Sampson, 430 Manchester St., Manchester, N. H.—H. S. Sargent, 30 Mead St., Everett, Mass.—H. R. Sewell, 610 Tech Chambers, Boston, Mass.—Harry P. Sweeney, Stroudsburg, Pa.—James M. Talbot, 126 Eighth St., New Dorp, N. Y.—William C. Taylor, 53 East Third St., Corning, N. Y.—A. H. Thompson, 407 Highland St., Manchester, N. H.—Edmund Leon Warren, 345 Walnut St., Manchester, N. H.—Harry Webb, 1747 Galloway Ave., Memphis, Tenn.—Arthur C. Winch, Saxonville, Mass.—Chalmers S. Clapp, Brook St., Framingham, Mass., R. F. D. 3.—W. F. Dolke, Jr., 375 School St., Watertown, Mass.—L. B. Ellis, 34 Essex St., Melrose, Mass.—Oscar A. Iasige, care of E. I. duPont de Nemours & Co., Niagara Falls, N. Y.

Have you sent in your Reunion Canvass Card?

1909.

CARL W. GRAM, *Sec.*, with Walter Baker & Co., Ltd., Milton, Mass.

The reminiscences that were to have come in for the class news in this issue are a minus quantity, and class news in general seems to be scarce.

Ten members of the class turned out to the alumni banquet:—Miss Babcock and Miss Luscombe, W. W. Clifford, P. H. Chase, C. L. Dawes, Harold Gardner, C. W. Gram, C. R. Main, A. B. Morrill, and J. W. Parker. The dinner was a sort of "Old Home" week, as Philip Chase came over from Newark, N. J., Charlie Main had recently returned from Montana, Morrill had just completed some experimental work at the Sewage Disposal Plant for the Baltimore Sewage Commission, while Gardner put in his first appearance at alumni gatherings since graduation. Dawes reported that his son Lawrence, born October 21, 1913, is now quite proficient with the slide rule.—The *Boston Transcript*, under date of January 15, 1916, reports that:

Mr. and Mrs. Freeland Hovey of Winchester announce the engagement of their daughter Madge, Smith College 1915, to Henry Kendall Spencer, Tech 1909, of Watertown.

A clipping from the *Lawrence Tribune* of December 30, 1915, speaking of Joseph White, says:

Since graduating from the local high school and M. I. T. Mr. White has been very successful. He now holds a responsible position with the Bureau of Mines Department, of the United States Government. His headquarters are at Pittsburgh, Pa., but he is occupied much of the time in traveling about the country inspecting mines and the housing facilities for the miners.

Chet Pope now has another boy, Robert Ahrend, born January 2, 1916.—J. Stewart Pearce sent a card announcing the arrival of a baby girl on October 16, 1915.—Announcement was received from D. K. Bullens & Co., Consulting Metallurgists, Frankford, Philadelphia, of the publication of "Steel and Its Heat Treatment," by Denison K. Bullens.—The D. Van Nostrand Co., has recently published "Laboratory Manual of Alternating Currents," by Lloyd C. Eddy, M.E., Ph.B., assistant professor of electrical engineering, Norwich University.—"Announcement has been made of the engagement of Miss Elisabeth Elting, daughter of Mr. and Mrs. Irving Elting of Brookline, to Mr. Harold Sharp, a graduate of the Massachusetts Institute of Technology, also of Brookline, the son of Mrs. Sharp and the late Dr. Benjamin Sharp."—We print the following item from the Cincinnati *Times Star*:

City Engineer Frank Krug has been formally appointed by the Rapid Transit Commission in charge of working out of the plans and the construction of the proposed rapid transit system. As his chief assistant the commission has appointed Morse W. Rew. Rew, who is a graduate of the Massachusetts Institute of Technology, at Boston, has had considerable subway and rapid transit engineering experience. For a number of years he was in the engineering department of the Boston subways systems, under Prof. G. F. Swain, who is consulting engineer for the local system; and subsequently he helped in the construction and operation of the New York subway and elevated systems.

This is the last opportunity that we have to reach you through these columns previous to the Big Reunion. You have already received two copies of the *Pantechnicon*, which explains fully all the general details of the Dedication and Golden Jubilee. You have also received a return postal card asking for information on several vital questions. Have you returned the card? If not, do so at once, as we must have the information in order to arrange for accommodations at the various events. Don't make the mistake in thinking that this is to be a *mere reunion*. It will unquestionably be the biggest and grandest affair that has ever been staged in Boston, or anywhere else. It is no exaggeration to say that any one of the three days offers sufficient reason to bring you individually and collectively half way across the continent, and when you consider three at a lick, ponder well before you decide not to be here. Already statistics show an attendance of slightly over 4,000, and it remains only to be seen how we can best accommodate the multitudes. There is plenty of room, and everyone will be taken care of properly, but the work at the Boston end will be greatly simplified for the various committees, if they have advance information; therefore send in the reply cards at once, and if you have reason to change your plans, notify us later.

Our class committee, which is in charge of the various events, consists of Charles R. Main, II, chairman, Joseph W. Parker, I, Lynn Loomis, III, Jim Finnie, VI (Official field scout), and the secretary. Whether or not we will hold a special class outing for two or three days, previous to the big celebration, depends upon the number who promise to attend. Your committee will also appreciate any suggestions. As soon as the reply cards are returned, we will immediately send out a poster, giving more detailed information. Thus far the number of local '09 men has been sufficient for us to guarantee only 100 men at the class dinner and other functions, but we should easily double that out of our 491.—According to a recent issue of a Boston paper, Robert N. Hoyt has been appointed health officer of Manchester, N. H.:

Mr. Hoyt, whose work at Manchester has begun and where he is meeting with the heartiest support from the local authorities, medical societies and other public-spirited organizations, is an M. I. T. graduate of '09. He was biologist of the Metropolitan Sewage Commission of New York City for a time, then health officer of Princeton, N. J. He came two years ago to Massachusetts where he has been the administrative officer at Wellesley in the Technology experiment, whereby adjoining towns combine in the establishment of a high grade of health office to serve them all. Mr. Hoyt has also been special lecturer to the public health classes at the Institute.

Address Changes

Philip H. Chase, 710 Public Service Bldg., Newark, N. J.—Warren L. DuBois, 162 Smith St., Perth Amboy, N. J.—Lloyd C. Eddy, Jr., 354 Hudson St., Buffalo, N. Y.—Alan F. Edge, 460 Walnut St., East Orange, N. J.—Marion H. Foss, Utah Metal & Tunnel Co., Bingham Canyon, Utah.—C. Nelson Harrub, 3125 Pleasant St., Washington, D. C.—Leon J. D. Healy, 41 Webster Ave., Chelsea, Mass.—Reginald L. Jones, 463 West St., New York, N. Y.—Garnett A. Joslin, Ray, Ariz.—Robert M. Keeney, Snyder Electric Furnace Co., 53 W. Jackson Blvd., Chicago, Ill.—Robert C. Kerr, Catonsville, Md.—Frank S. Lovewell, 100 Charlesfield St., Providence, R. I.—Lieut. David P. Marvin, U. S. C. G. C., Snohomish, Neah Bay, Wash.—Harold Schaffer, 1319 Kellam Ave., Los Angeles, Cal.—Joseph H. White, Bureau of Mines, Underwood Bldg., San Francisco, Cal.

1910.

CHARLES E. GREEN, *Sec.*, 63-75 Pitts Street, Boston, Mass.

After many years of silence we are glad to hear from H. R. Snyder, who gives us a long and interesting account of his experiences gathered as paymaster in the U. S. N., U. S. S. *Tennessee*. Both '10 and '11 (for it seems Snyder is claimed by two classes), Course III men should especially note the chances described in Haiti.

After five and a half years of separation from the Institute, in which time I have lost touch with many of its affairs, it is a great pleasure to me that I may

once more be identified with its interests as a recently elected member of the Alumni Association. Since my election as a member of the association, I have been picking up the lost threads and reminiscences of the three years in which I enjoyed the privileges of being a student at the Institute. From my comparatively small experience, it occurred to me to send in an article of a personal nature in which certain points of value might be rescued from the *débris*.

Two and a half years of my time at the Institute were spent as a "Regular" in Course IV. In the last half of the third year, I involuntarily became a "Special," as I was obliged to drop applied mechanics at mid-years. I left the Institute in June, 1910, after passing the final third-year examinations in all courses except applied mechanics, which had been dropped.

On August 2 of the same year, I was commissioned as an assistant paymaster in the United States Navy, having passed a competitive examination for this appointment in Washington, D. C., in July. Thirty-five applicants appeared from all over the country, some coming from California and the State of Washington, and the majority were college graduates. Of these, some were rejected on physical examination and some on mental disqualification; in all, seven of the thirty-five were commissioned.

A complete story of my experiences since August 2, 1910, would be too bulky even to outline here, but it will suffice to say that I have traveled, by ship's log, a distance equivalent to that of encircling the globe six times, and I have visited the following countries, many of them several times: France, England, Belgium, Holland, Germany, Argentine, Brazil, Venezuela, Panama, Nicaragua, Costa Rica, Guatemala, Honduras, Cuba, Santo Domingo, St. Thomas, Martinique, Jamaica, Porto Rico, and Haiti,—an anti-climax, as you will note. As per the usual course of advancement, I have received two commissions since my first, one giving me the rank of lieutenant, junior grade, and another the title of passed assistant paymaster. At present I am on duty as collector of customs and captain of the Port of Jeremie, Haiti, where I have been stationed for the past five months, following the seizure of the customs service of Haiti by the United States Naval Forces.

Having given this brief account of myself, I may the better proceed to a discussion of observations which are offered in a humble and grateful spirit to the Institute with which I am proud to claim a connection. Even at this point I can hear some of my classmates, such as Bill Foster for instance, whom I last heard of as prospering in his profession of architecture in Chicago, say, "Well what about you, Snyder, haven't you lost out?"

In passing let me answer Bill. No, I haven't lost out, for I have never regretted casting my lot with the naval service. A business man always thinks first of the remuneration. Regarding this I may say that, were I not married, I should be a subject of the income tax, which perhaps the average of the class are not yet worrying about. Neither from an architect's standpoint have I lost out, for in the past five years I have gained, as a mere incidental, a knowledge of the best art of the world by seeing it and an experience and breadth of acquaintance for which many an architect would pay thousands. I have observed construction in all stages of refinement, from the mud and bamboo shacks of the "Mud Age" to the marble palaces of Europe which fill the modern text-books on the subject. Moreover, Bill, I may be an architect yet. I'm only twenty-seven. I was soft at the Institute, but I'm hard as nails now, so look out for me, Bill, I'm armed! Perhaps I have little "architraves" tucked up my sleeve that you never heard about!

I need not tell the Institute again, what has doubtless been told so many times, that M. I. T. men are doing the big engineering stunts all over the world and are looked upon with awe and admiration by the world at large.

The training at Annapolis is very similar in many ways to that at the Institute. Many courses are identical. "Wilson and Tucker" on International Law is a text-book at Annapolis, as, I believe, are several other Technology books.

One principle of the training of naval officers of the line is not, I believe, observed in some courses at the Institute as much as might be and it is of this that my message consists. Every midshipman at Annapolis, although in effect he is at the

time an officer of the naval service, subject to a call to duty at any time, puts on the sailor-man's uniform, with which all are familiar, and during his summer vacations goes aboard some decrepit old ship to take a cruise in a sailor-man's status. He sleeps in a hammock, scrubs down decks in his bare, aristocratic tootsies, lives on hard-tack and beans, heaves coal in the boiler room in a temperature of 150 degrees Fahrenheit, goes "up and over" the rigging, stands a quartermaster's watch on the bridge, gets deathly sea-sick, is locked up in the brig, and finally swears he was never made for the navy.

Nevertheless, he goes through the wringer just the same, buttons and all, and he comes out a man who knows the practical workings of a ship from the standpoint of the men who will, later on, work under his orders. He has applied his "trig," and "calculus" and shot his stars in unknown oceans by the sweat of his brow. Trig. and calculus in the back storeroom of a remarkable cranium for memory are not his qualifications as a naval officer. He must break and set up a couple of main engines, many thousand horsepower in bigness and hang on the steering wheel in a raging ocean when he is so sick that he would like to die but can't, before he is expected to realize what "Strength of Materials" means.

My drift is apparent now. We have emerged from the fog and I am ready to admit that I am a believer in the sweat of the brow and the grimy hand as the proper supplement to all theoretical education. And I say at the same time that I believe M. I. T. is the most practical institution of learning in the United States.

Perhaps too much is even now crammed into a four-year course. To ease the strain and put in some fascinating, practical applications, why not limit the summer holiday to six weeks and retain for the extra sessions only those instructors who might volunteer for this work?

To make my point clearer, I will say that in several minor campaigns I have been associated with officers of our service who were putting in water systems, roads, bridges, and the like in pioneering work in foreign countries. Knowing that I had been a Tech man, innumerable questions were propounded to me on subjects such as concrete mixtures, hydraulic laws, etc., some of which I could answer and some of which I could not. The subject of which I was most ignorant and ashamed was my lack of knowledge in the actual composition of various concrete mixtures for various purposes. I had never mixed concrete myself; I had never wielded the hoe. I had only the following information, which perhaps most everybody knows—that concrete mixtures involve the use of a certain amount of sharp sand, cement, and water, usually molded on a crushed-rock base and reinforced with twisted metal rods. The questions were as to what kind of mixtures should be used for under-water work, what cement, what proportions, how laid. Unfortunately I had no engineer's pony at hand, so my information was vague at best. What—an architectural-engineer and can't mix cement? That was the appalling proposition I was obliged to meet. To be sure I had often seen the stuff mixed many years before, perhaps I had even read the formulas, but I had figured to leave all that to the dago hoe-wielder in the dim future. My time was too valuable for such rot.

Right here in Haiti there are some remarkable engineers, who, with densely ignorant black labor, can build anything from an airship to a president's palace, with a bag of cement, a ten-penny nail and a few tomato-cans. Their resourcefulness is wonderful and a single man is usually the brains of the entire enterprise of construction from foundations to chimney-pot. There is no sub-letting of contracts to specialists. If standard reinforcing material is lacking here, the engineer grabs a few "Generals'" rifles and pours the mixture around them. The reward to the engineer who can stand the rigors of existence and the instability of labor and life here, is commensurately great. To contract for a store at fifty thousand dollars and build it for fifteen thousand is no unusual trick for bright American engineers in Spanish-American countries. To do it, a man must know in addition to stresses and strains, all the score of arts and craftsmanship connected with the building and construction trade. He must not only know the theory of electric lighting but he must have put in electric wiring with his own hands. Only

thus can he save the useless inches and the useful ten-cent pieces. He is here with no other brains than his own.

The above is, of course, an exaggerated requirement to apply to the constructor who will always content himself with letting his light shine in some small city in the United States. Brains are on the market everywhere at home. But why be so dependent on the purchase of special brains for every little job? Why not ourselves be able to step outside the office a minute and direct Patrick as to how to mix and pour the cement?

I never fully realized what "Shades and Shadows" meant till I saw the actual shadows cast upon the very model text-book structures themselves when I was privileged to see them abroad. The shadows on my drawings, as I look back at them, were the weakest, most timid little shadows that ever a veil could cast. But since I have played among the real shadows themselves, I have learned to make my drawings stick out on the paper as if you could pick them off.

My suggestion would be as follows:

In all the thirteen odd courses at the Institute there might be installed what could be called a "Supplementary Regular Course," which could be made optional and not a requirement for a degree. The students who are not doing too much work in too short a time or are not obliged to do outside work in order to assist in meeting their expenses, would be encouraged to take this supplementary training in the summer or early fall. This work would be, in effect, an application of the theoretical points of their course of the preceding year for which there had been no time for direct application during the regular term.

The student architects, equipped with jumpers, overalls, and working gloves would go out to some pleasant suburb of Boston and build with their own hands a complete residence for one of the professors in architecture, putting in every detail of water-supply, drainage, heating, ventilation, electricity, papering, panels, mouldings, chimney, and the whole shooting match. With well-laid plans, and materials ordered ahead of time by the students themselves under proper direction, they would come pretty near finishing the residence in the allotted time. I believe most any professor would be willing to own a fine residence by merely expending the cost of materials and food for the student labor gang.

The chemists would do a similar stunt. They would start a soap factory and make all grades of soap. Or a group would spend their session midst the pleasant fumes of a tannery. Another might go to Pittsburgh and work gratis for Bethlehem Steel; another in du Pont's and so on. Think of the value of such experience and acquaintances to the student when he graduates!

The various heads of departments could map out the supplementary summer course in such a way that the students might earn a half-dollar a day, live in section shacks, and sleep in bunks. The proposition need not be expensive for the student or the Institute. I know that a certain amount of this work is done already. But why not put more emphasis on it? It may be the most valuable part of the course.

The ideal practical application of the overalls would, in my opinion, immediately follow the lecture but it is perhaps hopeless to contemplate such a revolution in educational methods. However, it would be the ideal way to make students realize the value in dollars and cents of every word uttered by the professors and instructors who have made Technology a by-word in engineering over the whole world. One hour they would hear the words; the next hour they would, with their own hands, move things together into a result of saleable value.

In conclusion, another example might elucidate my argument. A "steam-engineer" may be shown a model engine. He may even take it apart and put it together again. His instructor may tell him that the steam enters through this valve, goes here, pushes this, goes there, is condensed, etc. But I question whether that student really knows what steam is until he gets down in front of the boiler, with a shovel in his hand, in a boiling temperature, and actually makes that steam himself. He perhaps knows in a vague way that steam is a water-vapor, it is hot, it is expansive, etc. But is the power of steam, the raging might of the boiler fires impressed upon his brain in a never-to-be-forgotten manner, until he feeds that boiler? Will he all his life inspect his valves or design them with intense care for safety, unless he has faced the white-hot furnace and knows by actual imprint

on his body tissues what three hundred pounds to the square inch can do, or what it requires to make it?

What of Haiti for Tech men? This island lies almost due south of New York at a one-thousand-mile distance. Roughly speaking its area is about that of Massachusetts. Although a dozen presidents have come and gone by violence in the last dozen years, yet, with the aid of the United States, a new era is before the Black Republic which has for a century been too wild and savage to allow scientific investigation. We still sleep with automatics under our pillows, but within the next three years, American capital will flood to Haiti. In natural resources it is unquestionably the richest island in the West Indies and by far the richest area of its size in the Western Hemisphere. In agriculture such items as coffee, cocoa, cotton, and sugar, are marvelous indeed, but hardly interest the Tech man. As to richness of soil, however, it is well to say in passing that we here eat grapefruit every morning of about four times the cubic capacity of the largest I have ever seen in the United States. The juice of one of them will fill a two-quart measure.

The real wealth of Haiti lies directly under the surface of the ground. It is a land of promise, an El Dorado, for the mining and construction engineer. Copper, asphaltum, manganese, crude oil, hard coal, and other items of mineral wealth abound. Gold and silver can be found occasionally. A Montana engineer recently showed me a sample of copper ore which he was taking West with him. Although I know nothing of mining engineering and cannot vouch for his statement, he said that he picked up that ore on the surface, that it was 40 per cent. pure copper, and that when he told the story at home, his associates would without doubt call him a liar.

Any engineer contemplating work in Haiti should have a speaking knowledge of French, a forty-five caliber automatic strapped on his side, plenty of quinine in his medicine kit, a very stout heart, three or four indomitable companions, enough capital to pay a year's expenses, and enough surplus left to stake out a concession from the native government, of which I believe the United States is to hereafter stand in support.

The secretary is greatly relieved at the signs of life which the class is showing as evidenced by the four letters below:

John Avery writes from 919 N. Charles street, Baltimore, Md.:

How comes it that our class hasn't had any news in the last two issues of the REVIEW?

I've been in Baltimore for the past year and a half now and we won't finish up this job until this summer some time. I've made several hurried week-end trips home but haven't happened to run into any of the old boys. I'm going to do my best, however, to be on hand June 12, 13 and 14 and I hope that I'll have plenty of company.

Kindly change my permanent address to 15 Sewall street, West Newton, Mass., but I may be addressed as above here in Baltimore for another three or four months anyway.

L. T. Hemmenway has not only offered to pay his class dues, but on top of that sends in the following letter, and a stunt suggestion, which was turned over to the Reunion committee. We'd like a few more of the same kind:

I noted a few weeks ago a clipping from the *Boston Post* regarding a dinner of the class of 1910 in connection with preparations for the coming big Reunion in June. I am, therefore, very interested to know just what we are going to do, and must say that I have been somewhat disappointed in noting the scarcity of 1910 news in the REVIEW. I will admit, however, that there is no prize coming to me for class spirit, but I hope to turn over a new leaf and set a better example if anyone is trying to follow me.

At the New York alumni dinner on January 29, we scared up eight 1910 men as follows:

Benton and Allen, Course 1; Hague and Seeley, Course 2; Stump, Course 10; Wallour, Stein and myself, Course 6. Although the numbers of our class were not large, enthusiasm was high and we want to see 1910 in its proper place at the top this June.

No doubt you have formed a committee and they are working on plans, but is there anything I can do to help matters along? If you will send me a list of the men around New York, I will be glad to get in touch with each one personally to try and bring up as big a crowd as we can.

I am certainly ready to do more than my share to boom the old class which certainly should not slip back any from the foremost position we had when at the Stute.

In connection with our stunt at Nantasket, I have endeavored to think of some bright idea and am sending in a suggestion which I hope may be at least of some help. . . . Irrespective of what I may be able to suggest, it is absolutely necessary that 1910 be fully represented, and I am sure that if all the fellows are appealed to they will do more than their part willingly.

Since graduation things have gone very well with me, and, although I have not set the world afire yet, I cannot complain and the future looks optimistic.

Horace E. Stump, address 50 Church street, New York City, is also interested in our showing at the great day at Nantasket:

May I inquire what progress has been made toward arranging the 1910 stunt at the big Reunion? We are interested here in New York City in the success of such an undertaking and desire to be kept informed of the progress which is being made. I have heard nothing concerning this idea and am wondering whether anything at all has been done. If there has been nothing done, will you kindly advise me immediately that we may take steps toward securing some act?

The absence of class letters has stirred up another member to do his part. Carl Lovejoy writes from 3485 Broadway, New York City, as follows:

Here is a little news you can put in the REVIEW. I heard from Babcock that you were in New York recently but I am completely out of touch with the Tech bunch here, since I got married. Expect I shall rejoin the Tech club before long.

The great scarcity of news from 1910 in the January REVIEW has inspired me to write a letter now, and not wait until that indefinite time when I may become famous. It has been four years since I came to New York. My first job was with the U. S. Lighthouse Service, where I spent a very pleasant year, under our old physics instructor, Doc. Haskell. The work was supposed to be civil engineering, but I was side-tracked into a laboratory. I can assure you that I cut out all unnecessary accuracy and perhaps some that was necessary.

For the last three years I have been with the N. Y. Public Service Commission on subway work. I could not ask for pleasanter associates to work with, either those above me or under me. Nevertheless, most men, myself included, who work in the civil service are chronic kickers. The pressure of the work is not great enough to keep every one so busy there is no time for discontent, and it becomes very easy to make mountains out of molehills. My opinion is that half the men in the lower grades draw more and those in the very high positions draw less salary than they are really worth to their employer.

I have been married nearly two years. We are living and enjoying life in one of those human bird cages called apartment houses. I can look out the window from my breakfast table upon the Hudson River and the snowy cliffs of the lower Palisades and then I can walk to my dear subway train without wading through snow-drifts, nor is there any need for me to shovel coal. Life in the country is nice in the summer but just now I prefer the city.

Speaking of that summer I hope when it comes, to go to Boston for the Tech Reunion, and to see you and many other members of class of 1910.

The answer to these letters is in *The Mitten* which is being published by a self-appointed committee consisting of Cleverdon, Clapp,

Hale, Gegenheimer and Green, who are taking charge of the 1910 plans for the coming Reunion. The first issue was sent out the first week in March and anybody who has not received a copy by this time ought to send in a new address to the secretary or to the Alumni Office.

At a dinner held at the Boston City Club January 21 the following men were present: Hale, Manson, Cox, Riggs, Babcock, Gegenheimer, Clapp, Green, Cleverdon, Whitney, Patch, Lufkin, Downes, Myers, Conner, Crommett, Fernandez, Pilling, Pitcher, Pierce, Beach and Davis.

The following engagements of 1910 men have been announced: George E. Miers of Somerville to Ruby L. Ralph of Taunton.—Mrs. Mary Elizabeth Williams of Malden has announced the engagement of her daughter, Miss Marian Frances Williams, to John Prescott Wentworth also of Malden.—Mr. and Mrs. James M. Berry of Wyllis avenue announce the engagement of their daughter, Emma Louise, to Chester Dwight Dunlap, formerly of Everett, now of New Haven, Conn.—The *Post*, Washington, D. C., under date of January 15, is responsible for the following: "Mr. and Mrs. Morris Bien, 1208 Lamont street, gave a reception last night in honor of their son and his bride, Mr. and Mrs. Van Tuyl H. Bien. Mr. Bien Jr., was graduated at the Massachusetts Institute of Technology with the degree of B. S. in the class of 1910 and is now engaged in general contract and engineering work in this city. His wife, a graduate of Smith College, is the daughter of Dr. H. W. Conn, who occupies the chair of biology at Wesleyan University, Middletown, Conn., and who is also state bacteriologist. Mr. and Mrs. Bien will be at home after January 15, at 3600 Thirteenth street."

Address Changes.

John Avery, 15 Sewall St., West Newton, Mass.—Leander A. Dow, 400 Fifth Ave., N. Great Falls, Mont.—Percy A. Falkenberg, 38 Brainerd Road, Allston, Mass.—Edward S. Howe, Compania Antioquena de Instalaciones Electricas, Medellin, Colombia.—Bradley Jones, Carnegie Institute, Washington, D. C.—Bertholf M. Petit, 107 Twelfth St., Racine, Wis.—John H. Scarff, 101 Park Ave., New York, N. Y.

1911.

ORVILLE B. DENISON, *Sec.*, 63 Sidney Street, Cambridge, Mass.
HERBERT FRYER, *Asst. Sec.*, 35 Federal Street, Boston, Mass.

Please make a note of the above new addresses.

Right off the bat (the derivation of this expression is doubtless to be found in the sporting pages, which are now once again illumined with baseball dope) the secretary finds himself "flat"

for feature stuff. Why? Simple—a few months ago every member of the 1911 class was informed that this, the April number, of the REVIEW was to be featured as a reminiscence number. Coincident with the dissemination of the aforementioned info, appeared a request for you to write a few reminiscent lines to the secretary. Result: As in the case of our illustrious President, “watchful waiting” was the bunk and it is necessary to intervene with present day news. It is to be hoped that Señor Litzfelda will not oppose such intervention. Exit persiflage; enter current events.—Ere this story reaches your eyes you will have received a somewhat weighty series of official announcements, the primary object of them being, as you can readily surmise, to arouse, keep alive, and revivify the interest of every classmate in the coming Grand Reunion. It seems almost an insult to intelligence to mention the dates again here, but here goes: June 12, 13 and 14. Everything points to the biggest event in the history of the Institute, in fact in the history of technical education. Everything points to certain success, even the choice of dates—12, 13, 14—see, the committee is playing both ends to the middle on “13”! Very good, Eddie!—Stentorian tones resound: “First call for the 1911 Matrimonial.” (Business of announcements.) They’re off, a field featured by the entrants under dates of 1916. On January 3, Harry G. Knox, XIII, was married to Miss Augusta Margaret Miller in New York City. Knox is now an assistant naval constructor in the United States Navy and is remembered as one of the Annapolis men who entered the naval architectural course in our third year. Hearty congratulations!—On Friday of the same week in Cambridge occurred the wedding of Miss Vesta L. Iredale Young and Arthur F. Glazier. The groom is a chemist who was connected with our class for a short while near the close of his Institute course. More congratulations!—The very next day (let’s see, that would be the eighth—check?) Warren B. Hopkins, a popular Course VI graduate, was married to Miss Doris E. Phillips in Boston. Immediately after the ceremony the happy couple left for a wedding trip to the Pacific coast. Still they come—hearty congratulations!—In connection with the next and last announcement of a 1911 wedding, which the secretary is able to announce at this writing, it seems interesting to reprint the following clipping from the *Boston Transcript* of February 9:

Announcement has been made that Miss Helen Leghorn, daughter of Mr. and Mrs. George R. Leghorn of Verndale street, Brookline, will be married March 16 to A. Washington Pezet, son of Frederico Alfonzo Pezet, the Peruvian minister to the United States. The younger Mr. Pezet is an attaché of the Peruvian embassy in Washington, with its headquarters in New York. Mr. Pezet was born in Lima, Peru, and spent his childhood in England and France, and on coming to this country, attended the public schools in Washington, while his father was first secretary of the legation. He later studied at the Massachusetts Institute of Technology and Harvard College. He has been an amateur actor of more than ordinary ability and for several seasons was one of the leading players with The

Amateurs, in performances in Brookline. Mr. Pezet has produced his own plays in Washington, in New York and in this city, which have been successful. The first was "The Remaking of Raleighs," at a Washington theatre several years ago. Soon after, he appeared in the leading rôle of "Hilarion," of which he was the author. He was at one time associated with the former Toy Theatre, where he remained until last spring.

Again, hearty congratulations!—Add New Arrivals: Mr. and Mrs. R. G. MacPherson announce the arrival of Mary Elizabeth on February 4, 1916, weight $7\frac{1}{4}$ pounds. Dat a boy, Roy, let's have a co-ed now and then!—Here's two other boys to join the illustrious 1911 family: Mr. and Mrs. Gordon Ball Wilkes announce the arrival on February 17, 1916, of Gordon Borthwick Wilkes; Mr. and Mrs. William S. Burleigh are receiving the congratulations of their friends on the birth, March 9, of William Orlando Burleigh. Bring them to the reunion, Boys!—An announcement has been received as follows:

CHARLES R. STRONG
Architect
announces that he has established an
office for the practice of architecture
at
701 St. Paul Building
111 East Fourth Ave.
Cincinnati, O.

Strong was in the architectural department during the last two years of 1911's journey through the 'stute.—The secretary has recently received a most welcome letter from Franklin Osborn, 2d, who is with the Braden Copper Co., Rancagua, Chile, S. A. He says in part:

I am very sorry not to be able to be with you at the Fifth Anniversary in June, 1916, but it can't be helped. My contract does not expire until the middle of June and then it takes a month usually to return to the States.

Sorry you'll miss it, Frank, but for you the thought of getting back to the States again so soon ought to be a source of great joy.—W. J. Seligman is now with Hartmann Brothers, 641 Atlantic avenue, Boston. The concern specializes in hides, skins and wool. Sellie, don't "hide" anything from your classmates, don't "skin" them, and "wool"—that's all! The jester is clever—NOT!—H. F. Dolliver, still with the Aberthaw Construction Company, is now in Westbrook, Maine, where is being erected a new building for the S. D. Warren Company, paper manufacturers.—Here's a clipping from the Halifax, Nova Scotia, *Chronicle* under date of February 8, concerning the well-known "J. D.":

J. D. Mackenzie, instructor in geology at the Massachusetts Institute of Technology, is spending a few days in Antigonish, where he is the guest of St. Francis Xavier's College. Mr. Mackenzie's mother and brother, Sergeant Mackenzie, of the 85th Nova Scotia Highlanders, are at present patients in St. Martha's Hospital. Mr. Mackenzie is a native of Baddeck. He graduated at the M. I. T. in 1911 and has been in the employ of the Geological Survey of Canada during the summer months since 1908, where he was assistant to the late Hugh Fletcher, who for so long was identified with geological and mining affairs in Nova Scotia. Since 1912 Mr. Mackenzie has been in charge of field parties for the Geological Survey in

various parts of British Columbia and Alberta, and was during the past summer engaged in reporting on the mineral resources of the Bulkley Valley. He has published geological reports on portions of Southern Alberta and British Columbia, and on the Queen Charlotte Islands, and has contributed other articles to the literature of geological science.—*Antigonish Casket*.

While in Antigonish Mr. Mackenzie gave a talk to the engineering students of St. Francis Xavier's on the Massachusetts Institute of Technology and another on some geological facts of interest to an engineer. At the conclusion of these talks a vote of thanks was tendered—Mr. Mackenzie by the students.

—Look who's here! From way out in that place in Oklahoma where they are obliged to have beverages for use, because there's Nowata (Ooo, dust off the electric chair!) comes this bit of info, gobbled up and chronicled by the magazine *Scouting*, in the March issue:

The Boy Scouts of Troop 1, Nowata, Okla., undertook a significant community good turn recently when they conducted a campaign for funds with which to purchase a lungmotor. The necessary amount of money has been raised and the machine has been purchased and installed in the fire hall where it will be accessible at all times for any one to use in an emergency. Nowata is located in a mining section where accidents from gases and fumes are frequent and it is believed that the machine will be the means of saving many lives. The idea of the campaign was conceived and the effort pushed to a successful completion by Scoutmaster W. W. Warner.

—Don Stevens has severed his connection with the Peerless people in Cleveland, and has joined forces with the Goodyear Tire & Rubber Co. in Akron, Ohio. This new affiliation of course makes him one of the members of the large and growing Technology colony of Akron.—H. L. Robinson has joined the engineering department of the Norton Company in Worcester and is materially aiding in the great amount of construction plans which that company has under way and in view.—Bill Foster, architect, is back in Chicago. Yep, back where he was when he first went West a few months after graduating. Come back East in June, Bill, won't you?—Did I tell you the Reunion was to be held June 12, 13 and 14? Oh yes, I did. Gee whiz, I'm getting personal now. See, I'm using "I" and everything. While I'm in a personal strain, here's something for you. Shortly after this issue of the REVIEW will have appeared, if not before it appears, I am supremely confident that the press of the country will for one day lay off the War features for their front page stuff, to inform the country that Obie Denison and Miss Sara Allyne Dixon of Worcester have been married. Said event is scheduled for the last week in April. You know I've had a lot of fun from time to time jollying you fellows, who have sent me announcements of your marriage, but I sure am happy to think I shall soon join you lucky ones. By the way, the reason for the address change of Bert and myself seems in order. Bert has moved from Malden to Winchester, and prefers his mail sent to his business address. As for myself, I have left Worcester and the employ of the Norton Company and have joined forces with the

Simplex Wire & Cable Co., at their factory in Cambridge.—Now for address changes and then: So long, see you in June!

Address Changes

Carlton S. Barnes, 24 Raymond St., Everett, Mass.—Royal M. Barton, 54 May St., Worcester, Mass.—John R. Bowman, 85 St. Botolph St., Boston.—Roger T. Boyden, 46 Westland Ave., Boston.—Francis G. Cooke, P. O. Box 13, Bath, Maine.—Fred H. Daniels, 2 Regent St., Worcester, Mass.—Burgess Darrow, Goodyear Tire & Rubber Co., Akron, Ohio.—Orville B. Denison, 63 Sidney St., Cambridge, Mass.—Albert L. DeRomana, 105 Seward Pl., Schenectady, N. Y.—Henry F. Dolliver, 808 Main St., Westbrook, Maine.—W. D. Foster, 1607 Lytton Bldg., Chicago, Ill.—Herbert Fryer, 35 Federal St., Boston.—D. P. Gaillard, 13 East 36th St., New York City.—Julian S. Gravely, 66 Elmwood Rd., New Haven, Conn.—Edward R. Hall, 608 Chestnut St., Philadelphia, Pa.—Louis J. Harrigan, 114 Feronia Way, Rutherford, N. J.—Frederic C. Harrington, 1024 Munsey Bldg., Washington, D. C.—Howard P. Ireland, 21½ Logan St., Auburn, N. Y.—H. G. Jenks, R. F. D. No. 1, Ipswich, Mass.—C. Phillips Kerr, Catonsville, Md.—John L. McAllen, 362½ Park St., Portland, Ore.—Simon Nath, 42 Brookview St., Dorchester Center, Mass.—Clyde R. Perry, care of N. E. Westinghouse Co., Meriden Plant, Meriden, Conn.—Arthur B. Richardson, 132 Tenth St., S.E., Washington, D. C.—Naval Constructor Wm. L. Roberts, Miller Stile Inn, Miller Stile Rd., Quincy, Mass.—Harold L. Robinson, 103 June St., Worcester, Mass.—James C. Rogers, Choctaw Lumber Co., Broken Bow, Okla.—Charles A. Schafer, 404 North Second St., Camden, N. J.—W. J. Seligman, care of Hartmann Bros., 641-643 Atlantic Ave., Boston.—Abraham Shohan, Cristobal, Canal Zone, Panama.—Frank G. Smith, 214 Lincoln St., Waterbury, Conn.—Henry R. Snyder, U.S.S. *Washington*, care of Postmaster, New York City.—D. R. Stevens, University Club, Akron, Ohio.—Oswald W. Stewart, 18 Franklin Terr., Hyde Park, Mass.—Charles R. Strong, 701 St. Paul Bldg., 111 East Fourth Ave., Cincinnati, Ohio.—John A. Urquhart, 10 Maple Rd., Auburndale, Mass.—Harry W. Waterfall, 709 West Nevada St., Urbana, Ill.—J. Craig Watson, care of Bank of Toronto, So. Porkupine, Ont.—Walter P. Welch, 63 Mt. Vernon St., Malden, Mass.—Philip V. Wells, 102 The Argyle, 17th St. and Park Rd., Washington, D. C.—Edgar L. Woodward, Lowell Y. M. C. A., Lowell, Mass.—Erving M. Young, 540 Winchester Ave., New Haven, Conn.—Pedro de Souza Leães, Avenida Major Gabriel, No. 15, Manaus, Amazonas, Brazil, S. A.

1912.

J. E. WHITTLESEY, *Sec.*, 10 Regent Street, W. Newton, Mass.

At last Nineteen-Twelve has roused itself from its Van Winklian sleep and after rubbing its eyes has hastily scanned the horizon to find that it awoke just in time to see the sun rise. Of course by the sun I mean the great Golden Jubilee Reunion and Dedication in June. And naturally after such prolonged slumber a little bodily nourishment is in order and therefore a class dinner has been scheduled to take place at the University Club, Boston, Wednesday evening, March 29, at seven o'clock. It is taken for granted that all Nineteen-Twelves in this vicinity will dust the cobwebs from off their bowlers and hie themselves to this first Epicurean get-together, for there is much to talk over since last we met around the festive board at the Copley Square Hotel on the night we received our notices four long years ago. Most important of all is the crying need of ideas for our class stunt to be given at Nantasket. I learn that a great many of the classes have already patented their stunts with the Reunion Committee but I feel that the stunt we select will be so original that these other classes need not have gone to all that trouble. The time and place to hold our big class reunion dinner must be determined likewise. Then we must choose a new class secretary, one who is content to stick to Boston and not wander all over the face of the globe and Massachusetts. There will be other class matters of importance to discuss and every man who has the desire to add his presence and influence and thus help to make this dinner a success should sign the reply post card sent him and dispatch it immediately to Kebbon.

Just a word about the Reunion in June. As you have probably read either in the *Pantechnicon*, the official news distributor, or in previous REVIEWS, the Golden Jubilee Reunion on June 12, 13, 14, is to be the biggest event of its kind ever perpetrated. Every man must make heroic efforts to get here no matter where he is located, for it will be a celebration long to be remembered.

Just picture to yourself the joy you will experience, in stepping off the train, or boat, and feeling the good old cobble stones of Boston under your feet once more. And likewise anticipate the pride you will have in being present at the dedication of our wonderful new buildings on the Charles. "Take Me Back to Tech" is the slogan.

Those of us who took the architectural course at Tech learned to appreciate the fine qualities of our co-frere Kenneth Weeks, and it is with deep regret and a sense of personal loss that we read the following account in the *New York Times* under date of March 12, of the heroic sacrifice he felt impelled to make for the cause of France.

The official French dispatches, of January 16 last, announced the death at Givenchy on June 17, 1915, of M. Kenneth Weeks of Cambridge, Mass., a member of the First Regiment of the Foreign Legion—and that was all. The dispatches did not tell of the snatching off at the age of twenty-six years of a young man regarded by many critics as one of the most promising of American authors who, conscious of his literary opportunity, and materially comfortable in the enjoyment of a fortune in money, deliberately gave up everything to fight for France and practically sought death in a "suicide pact" made with a score of other Americans who swore to enter the war, never to surrender, and to cease fighting only at the declaration of peace or in death.

Kenneth Weeks was born in New England, December 30, 1889, of an old family, his father being Andrew S. Weeks of Boston and Cambridge. As a youth he studied at Harvard and the Massachusetts Institute of Technology, intending to become an architect, but when still a boy he showed a love and ability for literature that increased as he grew older and took more and more of his time from his architectural studies. When only seventeen years old he wrote a curtain-raiser entitled "The Victory of Sedan," which attracted favorable attention. This work was dedicated to Edouard-Louis-Victor Delbe, a private of the Twenty-third Colonial Regiment of France, whom the boy Kenneth found when visiting France, and from whom he received a personal touch with France and the Franco-Prussian War that fired his first love of the country.

In 1911 Kenneth Weeks went to Paris to study at the Beaux Arts, hoping that there he could combine his literary and architectural work without impairment to either; but, though he loved architecture, he loved literature more, and soon he was recognized in London and Paris as a writer of unusual merit. His fame did not spread to his own country, but the critics of the two foreign cities predicted for him a high place in American literature, some regarding him as a genius.

A volume of essays published in 1912 and three plays from Weeks's pen were encouragingly received and, just before the war began, his last and most ambitious work, "Science, Sentiments, and Senses," was on the press. He never saw the proofs, but it has been published since the beginning of the war and widened literary recognition of him.

In modest means as a youth, Kenneth Weeks inherited a small fortune a short time ago, so, in addition to assurances from public and press that his literary future was full of promise, he had the encouragement of knowing that he would not be hampered in his art by the necessities incident to earning a living. Yet, when the war broke out, he was one of the first to enlist in the Foreign Legion. Nothing could stop him. His friends, who appreciated his literary possibilities, pleaded with him to return to America, representing to him that his higher duty was to fulfill the promise of his genius rather than to give his life for France, but he would listen to no one.

"I have always professed a passionate love for France," he told one remonstrating friend, "and now is the time for me to prove that love by something more than words."

So fervent was the young man's devotion to the cause of France that he was not content merely to enlist, but also entered into what was called the "suicide pact." He did not expect to come out of the war alive.

Almost at once he was noted as a fearless fighter. He was mentioned in the dispatches for bravery at the taking of La Targette and Neuville-St. Vaast, and because of his escapes after a succession of daring adventures he became known as the luckiest man in his regiment. His particular work was throwing bombs, and in this he was recognized as more dangerous to the Germans than any of his associates.

Though in the thick of the fighting, suffering with his fellows and momentarily in danger of death, young Weeks never lost his nerve or his humor, as is shown in his letters to his mother, who hurried to Paris from Cambridge as soon as she heard of her son's enlistment. He had left Paris when she reached there, and she never saw him again, but the letters came as frequently as her son could write them.

His mother did not hear of his death officially until some three weeks ago, but some time after the engagement "north of Arras" a member of Kenneth's regiment

who returned to Paris told the mother that her son had been last seen "running against the Germans." When the official news came Mrs. Weeks had memorial services held in her church in Paris, and ever since her house has been the refuge of the members of the legion who find themselves in Paris.

The following interesting letter was received from Tomlinson who is in Chicago:

The 1912 men in Chicago held their second dinner of the winter last Wednesday night at the Tip Top Inn, adjourning later to decorate the top row of the gallery at "His Majesty Bunker Bean," and, between acts, to decorate nearby bars. Bailey, Johnson, Cory, Priest, Vaughan, Marceau and myself were present, while Loweth, Pratt and Babcock failed to show up: The first two are married and the third is courting a doctor's degree at Northwestern.

The dinner was a last bachelor party to Cory who was married on the 29th to Miss Margaret Virginia Molitor of Fond du Lac, Wis. Cory is now assistant Western manager of the Concrete Steel Company, and the recent wool market has netted him an automobile, a grand piano and a wife, and possibly still other desirable possessions. He's promised to entertain 1912 the first of March and to provide a girl for every man. Some job, eh?

"Hot" Johnson was responsible for the theatre seats. The ventilation was so bad that we all took off our coats and vests and enjoyed the show in solid comfort. Hot is now manufacturing children's toys and has formed the "Toycrrete Building Company."

Lee Bailey has gone into business for himself as a partner of "Schling & Bailey," architects and structural engineers, Monadnock Building.

Of the old crowd that were here the first two years, Jones, Gallagher, Morse, White, Bent and Noyes have married and left town.

Charley Jones, who is located on the electrification work of the St. Paul at Butte, Mont., was in town for a day the first of the year after a week's vacation in Boston. He and the undersigned dined in state on Egg Foo Young and Chow Meine in celebration.

That concludes my present string of reminiscences—is it spelled right—but in regard to the future. 1912 expects to have the largest class representation at the annual dinner of the N. W. Assn. of M. I. T. at the Engineers Club next week. We did last year and won a silver loving cup thereby. We're putting it up as a prize again this year, and expect to win it again.

Under the heading "Engineer to Present Ideas on Insulation" we have taken the following clipping from the *Cleveland Plain Dealer*, dated January 10:

C. B. Rowley, insulating engineer for the Cleveland branch of the H. W. Johns-Manville Company, will give an illustrated talk on insulation against heat and sound before the Cleveland Engineering Society tomorrow evening at 8 o'clock. The meeting will be held on the sixth floor of the Chamber of Commerce building.

Mr. Rowley received his degree of bachelor of science in 1912 from the Massachusetts Institute of Technology. He was connected with the Boston branch of the Johns-Manville Company and was transferred to Cleveland about a year ago.

Last December A. F. Allen received a most complimentary appointment to the position of health inspector in Framingham and was referred to in the papers of that city as the "best man available for the duties of a health inspector which are of such great importance."

He had served only a short time, however, when he accepted a better position in Tuscaloosa County, Ala., where he is giving great satisfaction as county health officer.—Cupid has been dealing

ruthlessly with Twelve-men and the following list of casualties is reported:

Mr. and Mrs. George W. Gray announce the marriage of their daughter Ruth Helen to Mr. Harold Greenleaf at Charleston, Ill. This is no other than our old friend "Todd."—Miss Isabelle Winifred Farrow, daughter of Mr. and Mrs. John Farrow of Ponkapoag, was married to Joseph Willard Farwell of Canton. Farwell by the way, is in the engineering department of the New York, New Haven and Hartford and no doubt will succeed eventually in removing the present freight embargo.—Miss Alice Rose Quimby, daughter of Mr. and Mrs. George Albert Quimby of Portland, Maine, was married to Bates Torrey, Jr. "Bates" is an efficiency chemical engineer in Syracuse, New York.—Frank E. Starr is engaged to Miss Marjorie Sharp of Newton. He has been associated with mining enterprises in Chihuahua, Mexico, and still lives to tell the tale.

On Wednesday evening, March 29, the class of 1912 held their first dinner in Boston at the University Club. President Kebbon presided. The real object of the meeting was to organize the class in anticipation of the coming celebration and dedication of the new Institute. After an enjoyable dinner and transaction of the class business, each of the thirty members present was called upon to give a brief résumé of his experiences since leaving the Institute. However, before this series of enjoyable talks the following committees were elected for the reunion:

Class Stunt: Robinson, Benson and McGrath.

Class Dinner: Watkins, Shepard and Sloane.

Class Banner: Edgerton, Springall and Lenaerts.

It was moved that we have another dinner which is to be held at the same place, 270 Beacon street, on April 26. At this dinner we expect to have reports from the committees and finish our preparations for the Big Event.

Dave Benbow has been appointed as alumni representative of the class fund, so do not be surprised if he calls upon you in his travels and solicits what he can for the equipment and dormitories of the new Institute.—Harvey S. Benson was the first man to tell of his experiences. He first went to Athol, Mass., with the Union Twist Drill Company and decided, after seeing the pay-roll there, to depart. After a year or two with the McElwain Shoe Company he finally went with the H. C. Raynes Company in efficiency work. While working with the United States Cartridge Company in Lowell he was taken over by the latter company as production engineer and, as a sample of what efficiency can do, stated that their production has increased from 75,000 cartridges a day to over 1,750,000. He was married in September, 1913, and has one daughter twenty months old.—Pierre Drewsen said that after completing his trip with Course 10 he went to Covington, Va., as a chemist in a paper

mill. After about a year he went with the same company in New York and was engaged in research work there. Prior to this he shipped as first officer on a sailing vessel bound for Vladovostok, Russia, and was taken prisoner by the English at Gibraltar, who claimed he was a German spy, and was forced to return to this country. He is now working with the U. S. Cartridge Company in Lowell. Still single.—E. H. Schell went with Benson to Athol after graduating and also departed with him. He then went with the American Locomotive Company in Providence and claimed he made them so efficient that they made more automobiles than they could sell. He was informed one day that he would have no job after 12 o'clock that day as the company had failed. He then went to New York subsisting as a draftsman until he also went with H. C. Raynes Company in efficiency work. He helped organize several concerns in Fall River, varying from foundries to street railways. He is now with the U. S. Cartridge Company of Lowell, as statistician. He was married in June, 1914, and has no children.—J. S. Grant escaped from the Institute and went to Saskatchewan. When frozen out of there he returned to Boston and was with Stone & Webster for several years, partly in Savannah, Ga., and in Boston, doing considerable work on the new Tech buildings. He was afterwards in the real estate business a short while and finally went in for himself, returning to Stone & Webster for a short time to recuperate his finances during the winter. He expects to start in contracting again during the coming summer. He is still single.—C. F. Springall said he had led a rather uninteresting career, doing architectural drafting at the start with Kilham, Hopkins & Parker, leaving there to go with Thomas & Rice, another Boston concern with whom he has been ever since. Later he was outside superintendent for them and expects eventually to go in for himself. He is still single.—F. A. Funk has been doing architectural work in this city since graduation and is with Densmore & LeClear as a structural engineer. Still single.—C. E. Moorow said he used to be a great football player and during the summers, to keep in trim, worked at a steel mill and became so interested in the work that he came to Tech, entering in our junior year. Practically all of the time since leaving he has been instructor there. The summer work, however, has been interesting and he has worked in several large buildings as structural engineer, including the new M. I. T. building. He now teaches reinforced concrete to the Lowell Institute men.—Walter W. Lang, after taking the Course 10 trip, returned to the Institute for two years, taking a master's degree in 1913. After doing considerable research work under Dr. Walker he went with Samuel Cabot of Boston as laboratory chemist. He gave a very interesting talk on the coal tar industry that they are engaged in and received considerable applause. He is still single.—Robert J. Wiseman

returned to the Institute in the newly organized research department of the electrical engineering department and has since received the degree of doctor. He is still in the research department doing very valuable and interesting work in the investigation of insulating material.—John W. Raymond says that after graduating he did not find a job immediately and went home to the farm. His father, after looking at the varied curves that he plowed, was finally able to pry him away and he got a position much below his expectations in Lynn. He had no sooner accepted than he had two better offers and finally came to terms with the first company where he has stayed ever since. His work has been mostly of the municipal engineering line in that city. He is married but has no children.—Vernon G. Sloane first went to work in North Carolina on preliminary surveys for the Hydro-Electric Company for about eight months. He then kicked around New York for some time, finally working with a paving company both in New Jersey and New York City. He finally returned to Boston and is now a dam inspector for Middlesex County. He is developing a small contract business on the side and has great expectations. He is still single.—A. C. Albee, I cannot write fast enough to tabulate all the different positions he has held but, as I remember, it was something as follows: He first went to the Atlantic Gulf and Pacific Company on canal work; next to New York City on dredge work. He then went with the Erie Railroad in Pennsylvania and, having an offer from a building company in New York City, returned there. The company failed and he was up against it. He was next heard of in Canada on the Big Ship Canal, a job involving the pairing of 600,000 yards of concrete. Tiring again, he returned to Boston and is now helping "Tod" Sloane in the contract work. Married? "No."—C. H. Brian, still single, spoke very briefly of his work with the Harbor and Land Commission at the State House. With the exception of a few months, he has been there since graduation.—H. G. Watkins has been in all phases of railroad work since 1912 and is now division engineer on the Boston & Maine with headquarters at Fitchburg. He was married a short time ago.—P. F. Lombardy left after two years at the Institute and said he studied pharmacy for some time, but finds that the only appetizer he has yet discovered is good company. He says he is a man of great common sense as he is still single.—As Thomas C. Fisher did not sell very many boilers for the Spencer Heating Company he changed to the Factory Mutual Fire Insurance Company and is now traveling for them, collecting information regarding the work on properties which they have insured. In his travels around New England he has run across Vincent Allen with the American Brass Company in Torrington, Conn., and Walsh with the Great Northern Paper Company in Maine; also Estes who has a good job with his father as agent for

the Continental Cotton Company in Lewiston, Maine. Fisher is still single.—A. R. Davis started in with the Peerless Company with Mabbot in their palmy days, working from the drafting room to a position as engineer on equipment and accessories. He left them, coming to Boston with the Gray & Davis Company as chief draftsman. He changed again, acting as salesman for a local structural steel and hardware company and is finally with the Wentworth Institute in Boston in charge of the production of their small manufacturing capacity.—H. N. Otis first went with an aeroplane company in Long Island; later changed to the New York Edison Company and finally with the Factory Mutual Insurance Company in Boston. Still single.—K. C. Robinson started in Athol with Schell & Benson at \$10 per, but very shortly returned to the Institute as assistant and is now in the steam laboratory. He is married and has a boy six months old and says he is going to be a M. I. T., '37. "Ken" also says Doble is a father.—Harold Griffin next delivered the prize talk of the evening, and kept us doubled up with laughter over his varied experiences. He first left the Institute to go with the Amberson Hydraulic Construction Company, and, after working there as a machinist on the night shift, struck out for the salt water. He landed in Seattle on the Pacific coast and got a job in a lumber camp about thirty miles out of town by way of three railroads and a six-mile hike. After three days he felt homesick, found lice in the camp and borrowed the money to return to the East. He went back to the "Stute," graduating in 1913. He then shipped on a four-masted schooner. When the trip was over he tried drafting for a while. He was finally fired and was truly up against it. He was invited out to dinner with another Tech friend one evening without a cent to his name. A third man called them up and asked them out with him and after dinner suggested they match to see who would pay. "Grif" collected his nerve, borrowed a cent, and let one of the other fellows pay. He finally shipped on a schooner bound for Norfolk with a little coal. Not stating just whose fault it was, they were in a collision but finally made New York where he borrowed money to come home for Christmas. When he returned to the vessel a few days later, he found that Christmas day when everybody was away, the ship had dragged anchor into another smashup and another \$500. He finally made Norfolk, loaded coal there, had a very trying experience getting by Hatteras; made Florida, changed cargoes and returned to New York, was paid off at the remarkable sum of a dollar a day for fifty days. He returned home taking charge of the house that his mother was then building. He then took a chance on the civil service exams. on his Course 2 experience for the coast survey and passed. He had several remarkable experiences wire dragging the approach to several harbors, including Portland, Me., Cape Cod Canal, Hackensack and Perth

Amboy. While there he was married and his next move was up to Long Island on the chart revision. He was then ordered to the Philippines for two years but told them that as he had just been married there was nothing doing and left the service. He is now working for the New Haven but feels the call of the sea and talked all the way home to me on the train of the wonderful fortunes being made now due to the scarcity of vessels and is sorely tempted to strike out again. We trust that in the future "Grif's" wife will let him smoke more so that two cigars and a cigarette will have less effect on his digestion.—Raymond E. Wilson has been all the time since graduation with the Factory Mutual Fire Insurance Company. For the first two years he was traveling around New England for them and is now in the laboratory making special investigations. The class baby is still single and has a more rosy complexion than ever. He also said that Robinson, Course 10, is now with Becker who spent one year at our class and who is now practically in charge of the Becker-Brainard Milling Company of Hyde Park, Mass.—D. J. McGrath first went with the Hall Construction Company on hydraulic power house work in Maine. He returned as assistant in the steam laboratory the next year, and the following summer was with Hugh Nawn on subway work in Boston. He had a bad fall while there and was in the hospital three weeks. Mac is now in the Research Department in E. E. and is investigating why people should pay more than 5 cents carfare on the street railways; a purely economic question, but interesting. Mac says all the ladies that he sees every noon on Boylston street are to be congratulated as they still have a chance at him.—W. H. Baxter first looked up a rotten proposition in Denver, jumped to an assay office in Arizona, finally with the Old Dominion Mine Company, located up another rotten job in Los Angeles, jumped to Frisco and got as far as Seattle on his way to Alaska where he had a telegram of a good job back in Los Angeles. He was so late getting back that when he landed there the job was gone and he was flat broke. Worked for a short time with the Rayfield Carbomotor Company, driving and racing with Barney Oldfield and some of the big ones and finally went into a small business with two other fellows in bonds and mortgages. He came East in August, 1914, in the interest of the company, but the impending war killed it flat, at least his wild dreams, and he is now, still single, with the H. W. Johns-Manville Company in Boston.—C. W. Webber was notified that he did not graduate but finally made inquiries and was assisted by Professor Miller, every good Tech man's friend who sent a special messenger to his house telling him that there had been a mistake and that he had passed. He made a bad start with the Stevens-Duryea Company in Chicopee, then for a time with the Western Electric Company and finally with the Underwriters Laboratories in Boston, his work comprising

inspection of both building materials and fire prevention apparatus. He has recently been appointed their engineer at Providence. He is still single.—O. C. Lombard mentioned the fact that four years after graduating he was still petitioning the Faculty to have his class changed to '12 instead of '13. He is with the New England Telephone Company with headquarters in Boston. Starting in with road work he has worked into an office position and is at present gathering information for a vacuum valve repeater for transcontinental lines. He is married and has a youngster six weeks old.—J. H. Lenaerts, after three and one half years of construction work with Stone & Webster, including Boston Elevated, Keokuk Dam and two or three other large jobs both in New York State and Massachusetts, entered a toy company. They manufacture those jumping jacks which you have probably seen with phonographs. The latest invention is a dog in a kennel which he says will come out when you whistle. He is now with H. M. Hope, consulting engineer in Boston, and was married a short time ago.—G. I. Edgerton has been with the well known architect, Guy Lowell, since graduation but did not seem very enthusiastic as he ended his remarks by "No prosperity." He was married last fall, perhaps that explains it.—F. J. Shepard, Jr., started in with B. F. Sturtevant Company, got tired of Hyde Park and was selling storage batteries for some time in Boston. He is now with a company just starting out making an elevating platform truck and seems to be doing very well. He is married and has a daughter three months old.—H. E. Kebbon first drifted around to several colleges, including Pennsylvania, Virginia, Michigan, Kansas, etc., collecting information for John R. Freeman in connection with the new "Stute." When W. B. Bosworth was appointed as architect he applied and was given a position as resident architect where he has been nearly three years. I wish I could give more space to tell of the wonderful work "Keb" has been doing, but we hope you will all see it in June. Still single, but has hopes.

The meeting was completed by the good old Stein Song and E. H. Schell, our newly elected treasurer, collected \$1.50 each, which everyone was glad to have spent. We hope to hear before we are bankrupt of our ex-treasurer, who was last heard of selling stock for an oil proposition somewhere in the Middle West.

We have all been out of Tech long enough now to be able to write a letter for publication in this column which will be of genuine interest to the others in the class and I wish to make an especially strong appeal to Twelve-men to contribute personal accounts of their experiences since graduation. We must not lose touch with one another, for bonds were formed at Tech too precious to break, and as we grow older these undergraduate friendships must develop into life long relationships which will bring an abundance of happiness to us all.

1913.

F. D. MURDOCK, *Sec.*, University Club, Hartford, Conn.A. W. KENNEY, *Assoc. Sec.*, M. I. T., Boston, Mass.

Yes, we are still raving about the Reunion this June,—and do you blame us? Over a hundred and fifty men have answered the class letter, within less than two weeks of its mailing, and the enthusiastic anticipation and interest which many of these men have voluntarily expressed assures that the class has caught the spirit of the affair. Really fellows, it is going to be one whale of a good time, and there is lots on the sober side of life to be gotten from it. It is, indeed, an inspiring thing to talk with a classmate who is bubbling over with enthusiasm and ambition in his work, and opportunities of this sort will be ours with no limit except that which the all too short time which we are together will impose. The class Reunion Committee is rather close mouthed regarding certain plans, but it has leaked out that the THIRTEEN costume is to be a startler, and that the stunt which is almost settled upon is such a production as to excite the envy of Mr. Griffith of "Birth of a Nation" fame. The committee is planning a ball game between benedicts and bachelors, that promises some rare sport for players and spectators alike. At any rate, it is guaranteed that the game shall not be "dry." But, in the classic language of "Looney" Derr, "more of which later!" The thing for you, gentle reader, to do this instant is to decide that you will be there. Just a very little sacrifice over the short period which now remains will make it financially possible. That settles it, come!

It looks as if the country's prosperity were reflected in the size of our matrimonial news. The following engagements are announced: W. Earle Caldwell, X, to Miss Alice E. Bosworth—Stanley W. Parker, III, to Miss Louise Baker—E. L. Bray, VI, to Miss Mildred E. Daniels, of Waterbury, Conn.—Robert W. Weeks, VI, to Miss Dorothea L. Bauer, of Washington, D. C.—Alexander Morrison, X, to Miss Mildred F. Wildes—Patrick D. Horgan, IV, to Miss Margaret McCarthy—W. H. Torrey, X, to Miss S. P. Stevens—John P. Gallagher, I, to Miss May G. Allen—Henry O. Glidden, IV, to Miss Dorothy Ayer, Wellesley '14, of Cambridge, Mass.—Percy G. Whitman, III, to Miss Gladys E. Jones—Allison P. Smith, VI, to Miss Marguerite Schwartz, Simmons '15, and Kinsley V. Dey, I, to Miss Dorothy Cunningham. Quite a few have gone a step farther, and are married: A. C. Goodnow, X, to Susan Newell, January 20, 1915—H. R. Wemple, X, to Margaret C. Rice, November 1, 1915—F. H. Pendleton, Jr., V, to Helen P. Dinsmore, January 1, 1916—J. W. Livingston, X, to Marguerite Melvin, January 27, 1916—G. H. Clark, II, to Emma E. Walton, January 27, 1916—A. H. Clark, V, to Persis T. Kidder, February 12, 1916—P. B. Terry, X, to Marion Spaulding and J. J. Strachan, I, to Mary Louise Hartich, March 15, 1916. Wait a moment,

please, we are not through yet. We have some proud fathers to mention. M. W. Salomonson has a daughter, Mary—George R. Wallace, Jr., became a father on August 29, 1915, to George R. Wallace, 3d—C. W. Rieser's baby, Elizabeth Eleanor, was born December 30, 1915—F. D. Rich's, X, second daughter, Betty, was born January 1, 1916—Claude Cairns', XIV, second child, Nancy, was born January 9, 1916—On January 20, 1916, Ruth Hodgdon Alden was born to Mr. and Mrs. Gardner Alden, X—Elizabeth Lane was born February 7, 1916, to Mr. and Mrs. Gerould T. Lane, V, and on March 1, 1916, Edward B. Germain, Jr., was born. To you all, our very best wishes and congratulations!

Changes in profession are becoming decidedly fewer, and that is true even at this time when there is a considerable demand for men in those industries which are making war profits, and the temptation to leave the less favored lines is great. Quite a few of the chemists are now employed with munitions factories. Course I men have been very loyal to the old, honored branch, of civil engineering. Allan Beale writes a cheery note telling that he is very busy on the two-million-dollar contract, which his employers in New York City have just closed. Allan made his bow as a contributor to scientific literature in an article in the *Engineering Record* of July 17, 1915. On the side, he is doing some work for a consulting engineer, computing stresses and designing on a new cantilever bridge for the Ohio River; he states that the bridge is a quarter of a mile long and the computations not much shorter. Any Course I man agrees to that statement without any argument. —Henry Burr is back from Arizona, and located at Nashville, Tenn., where he is assistant engineer for the Nashville, Chattanooga & St. Louis Railway. Henry is fortunate to be getting his training in such close proximity to the "south west" which all Course I men know to be the home of best practise in railroad engineering. Just recently he designed five bridges, worth \$100,000 and a structural steel shop, of two and one-half stories and is now finishing a three-story reinforced concrete warehouse. It is a considerable task for a young civil engineer to design the plumbing, heating, lighting, ventilating systems as well as the building itself, and the foundations, but with the aid of brains, training and an I. C. S. correspondence course in architecture Burr was able to accomplish this feat.—Tom Lough has left teaching and is acting county surveyor in Mandan, North Dakota.—J. W. Brooks Ladd is now in Chicago, engaged in the manufacturing of special non-ferrous alloys.—Ralph T. Alger is erecting engineer for the N. Y. Continental Jewell Filtration Co., at Jersey City, N. J.—Alas, we have lost one of our talented travelogue artists. Al. Milliken has left the service of U. S. Coast and Geodetic Survey, for structural design work with the J. H. Tower Iron Works of Providence, R. I. "Millie" finds his new work comparatively unromantic.—E. C.

Gere seems to be in the right business, for the nonce, anyway. He is production engineer for the U. S. Cartridge Company, at Lowell, Mass.—“Bunnie” Brett had the misfortune to have to undergo an operation for appendicitis recently, from which fortunately he had a rapid recovery.—Albion Davis, out in Keokuk, Iowa, writes as follows:—

Keokuk is beginning to wake up and do things. There have been located here several big enterprises which have been attracted by the cheap power. The old flimsy bridge that crossed the Mississippi has been rebuilt so that the city will have better communication and transportation facilities with the country due east of Keokuk. As it is now, all traffic to eastern points goes either north or south from here before crossing the river. The ‘big brook’ was up in arms last June and again in August but since then it has been eating from our hands. Last June the high water took me away from Keokuk for a couple of weeks. I made quite a number of stream flow measurements and the work left me moving back and forth over the greater part of central and eastern Iowa. The Power Company coöperates with the U. S. Geological Survey in all the stream flow work done in Iowa. Our office is a district office of the Survey, through which all Iowa work is carried on. It is a very convenient arrangement for both parties.

Joe Strachan, who played the principal male rôle in a wedding ceremony last month, is doing some interesting work. Joe is engineer, on the staff of Gunn, Richards & Co., the New York City production engineers, engaged on appraisal work.—Karl Briel is working for the Childs Restaurant Company in an engineering position.—“Pete” Haynes is a bond salesman in New York City.

What more spectacular name could be mentioned first in a paragraph on Course II men than that of “Mons” Gagnon. We quote from his note:—

It is a nefarious lie that I have anything to do with Procter or the Y. M. C. A. Sunday School. It is true that I went to church three times since I have been in West Rutland.

—“Good” for you, Mons.—W. D. Stevens, who spent two years at the Institute, as a mechanical, has had an everyday, knock-about, sort of experience since leaving. He writes:

In June when I received leave of absence from Tech, with the unanimous consent of the entire Faculty, I obtained a job as chauffeur for a party who stayed at the same hotel as I did. I jumped at the first job in sight in view of the letter I received with the last check from my father, who told me to hustle for myself for “one year from date.” I had just entered on my duties when a telegram came from home telling me that I was to come home and get a job. I did and it was some job. It was two dollars a day and ten hours daily. It consisted of moving pianos, safes, etc. I stuck to it till September when I got hold of a better job, nine hours a day with the same wages.

I kept up the performance all summer and in September my father relented and told me that he had made arrangements for my continuing my schooling. I was to put in one year at the Michigan College of Mines taking work that would be of value to me in my mechanical course at Tech. Money was again coming in easy and I was making progress, when my father suddenly died in April. I then decided to quit school and continue his business which was the publication of the *Copper Handbook*, a yearly publication with a good circulation, devoted to the copper mines of the world. Relatives decided differently so I stayed at the college and graduated as engineer of mines in August, 1915.

Early in the morning after finishing school, with the customary celebration of a

large evening down town, the president of the school called me on the 'phone and told me that he desired my presence in his office.

I thought that I had a clear conscience so I hurried "Oscar the Second" out of the barn and hustled to the president's office.

He asked me, "Are you a good pipe fitter?" I told him that I was. He then told me that the Winona Copper Company wanted a pipe fitter who could devote his spare time to chemistry.

I didn't lose any time in getting to the job and in the afternoon showed up at the mine, which is thirty miles south of Houghton. I was immediately put into the laboratory and told to get to work. Bottles of solution kept coming in every half-hour and I soon ran out of beakers, etc., trying to keep up but I finished up well on time for the six o'clock whistle. The boss looked over my results and said "very well, you will do." In the evening I went down to the mill again and looked about to see what I was working on and found that it was an experimental leaching plant for the recovery of copper from general mill tailing.

Experimental work lasted two months and then the plant was closed down. Extraction ran 97 per cent. so the process was O. K. and the next job was the designing of a new system to make the process continuous. I then had two months of designing and was made assistant mining engineer. Our cold winters made work out of doors rather difficult for the continuation of the leaching so work was postponed till the first of April.

The first of the year the company decided to erect a new shaft house, so I was put to work drawing plans. This took about six weeks. Erection is now under way.

The unpleasant part of the work was giving levels and lines while the thermometer hung around twenty-five minus.

I am very sure that I will be at the Reunion in Boston next summer.

—Ray Palmer is with the Consumers Company in Chicago, superintending and working for highest efficiencies in the operation of eleven ice plants.—The first of this month "Walt" Bylund took up his duties with the Hyatt Roller Bearing Company of Newark, N. J.—Just to show how versatile a Course II man can be, Thomas Reyburn is preparing to follow the law, at Washington University, St. Louis.—Edgar Taft is now with the Remington Arms Company, at Bridgeport.—Eddie Hurst seems to be established as a production manager at Montour Falls, N. Y.

It is not surprising to find Course III men at the ends of the earth. Percy Whitman is surely at one end, at the Pike Hill Mines, Corinth, Vt. He writes:

You can sure count on my being there in June. I have already told the boss that I was going and he said, "Go ahead" and also gave me orders to lap up a little tongue-lubricant for him, which I believe will be possible.

Since graduation I have bummed around a little. For a year and a half I was out in Colorado working at a coal mine and got up to a pretty good job before I left this winter. I was purchasing agent and assistant clerk with several other little jobs thrown in whenever the "Old Man" could think of something he wanted done better than he could do it himself.

Just now I am assistant manager at the copper mine here and things are looking pretty good for a fine future. Of course the price of copper being where it is now has helped us a lot but even without it we have a little joker up our sleeve that ought to help out a bit.

The place here is sure one — of a dump just now with the snow up to your ears and the thermometer way down, but what can you expect when you take mining and try to follow it. The eats are what is commonly called "plain," doughnuts and pork being the long suit and very long at that, for there doesn't seem to be any end to them.

—Cheer up, Percy, think of what is in store for you in June!—
“Al” Gibson continues in manufacturing. He is now in the factory of the American Beet Sugar Company, at Oxnard, Cal.—Phil. Schmitt, now the proud father of two children, is superintendent of the electric furnace department of the United Steel Company, at Canton, Ohio.—Charles L. Burdick, now doctor of philosophy, is doing research work in chemistry at the Kaiser Wilhelm Institute, and in physics at the University of Berlin.—The editor of the REVIEW recently received a postal card from Lammie in which he sent a letter address as follows: Lieut. Lionel H. Lehmaier, 4th Battalion, 1st A. I. F., Egypt, Africa. He claimed that he has lived in almost every country on the earth since he enlisted in the army, excepting those in the Arctic and Antarctic Circles. He was well when he wrote and stated that he had been made a lieutenant.

Here’s a bit of wild scenery. Read what “Arizona Sam” Knight has to say:

First about this Reunion business. If there is any one that claims to want to be there more than I do, I claim he’s a doggoned liar. It’s a long walk, however, and I’ve got so that a mile walk looks as far as to walk from Boston to Chicago. If I don’t show up, tell Newt Eichorn to take on a couple for me. Arizona is a dry state, or at least it is supposed to be, and with bootleg whiskey five dollars a quart only a bloated plutocrat could get tight.

To get down to brass tacks, soon after leaving school I came to Arizona to take a job with the Iron Cap Copper Company, operating near Globe. I stayed with it a year, working both below and above ground, and pulling in from 75 to 125 hard iron men a month. During my stay there I came into touch with several cattlemen and a number of cowpunchers, and finally threw up the mining game and took a whack at cowpunching for a few months.

I had several amusing experiences when I first started in. Two or three bronchs have brought me into closer touch with Mother Earth than was agreeable, and several more have made me sweat some for a few minutes. I’ve been tangled up in a lass’ rope until it seemed like the air was full of it, and even now I sometimes have trouble handling my rope. However, I came to like the life, and decided to go into the business.

After spending about two months looking over the country, I finally rode into this neighborhood one day, and have now taken up a homestead. In other words, I have bet the Government \$16.50 against 160 acres of land that I can live here three years. Have spent a year getting the place fenced, well drilled, windmill put up, buildings completed, corrals built, etc., and have just started buying a few cattle. Have now 35 or 40 head, and shall get them located on the range before buying more. After they are located, I shall increase this spring to 125 to 150 head, after that gradually increasing as forest regulations and range conditions permit. It will take two or three years to get anything coming in, but I believe I will then be paid for the waiting.

I don’t reckon the boys would know me now if they should happen to drop in on me: chaps, boots, spurs, six-shooter and wide brimmed “John B.” would make even Bill Katzenberger look tough. Anyhow, even if I’m not recognizable, I’ll sure introduce myself if any ’13 man ever does drop around.

You can’t expect an onery cowpuncher to write anything like a decent letter, so I’ll spare you any apologies. Incidentally, if any of the old guard can scrape up enough cash to buy some paper and ink, or nerve enough to steal some, I’ll be glad to steal a little myself to reciprocate.

Thank you, Sam, that was as good as a trip to see Broncho Billy Anderson in the movies.

The architects are a pretty staid lot. A little later we hope to be telling proudly of the great buildings which they have designed. After successfully closing the preliminaries to a matrimonial deal, "Heinie" Glidden, hastened off to Jackson, Mich., where he is draughting and designing for Leonard H. Field, Jr., Tech '99, architect.—Zenas Crocker, who divorced architecture, for electrical engineering, and later, modern dancing, is now a financial reporter for the *U. S. Investor*, a Boston publication.

These are heydays for the chemists. Max Shafran is chemist for the Tamaqua, Pa., plant of the Atlas Powder Company.—Several others are engaged with munitions manufacturers: Daniel E. Lewis is with the Winchester Repeating Arms Company, New Haven, Conn., working on the heat treatment of steel, and Phil Terry is engaged in organic industrial research for du Pont & Co., at Chester, Pa.—Walter S. Hughes is chemist and general utility man for A. D. Little & Co., Boston.—No one has heard F. H. Mahoney complaining of his work, as chemist with the Everett Distilling Company, being dry, but perhaps "that" is not what they manufacture after all.—Chauncey Crawford is preparing to write a monograph entitled "How to be Cheerful though a Chemist." He shows ability in the following:

I have been fitting pipe, laying bricks, welding, lead burning, doing a little carpentry and machine work, in fact, dabbling in most of the allied trades, for it appears that Course X men are expected to be generally useful. In this work I have acquired a strictly mill vocabulary and am prone to hark back unto such masterpieces as the following morsel for Prof. Arlo Bates' attention—pulled nonchalantly by a co-worker, not a Tech man, thank Providence. He said one day—"Philander, he must 'a eat that there Gooch crucible we got give to us yesterday," and be aware that he pronounced eat in the present tense "eat" to rhyme with "feet," not with "pet." Great stuff! But to continue: the writer is still able to persuade the American Sheet & Tin Plate Co., to pay him enough each month to keep him in the featherweight class and warm. The work is chemical, physical and Hungarian, and runs the gamut from pyrometry to pickling. This latter is an external application and has no bearing on the condition of the operator.

—You will recall the attractive reunion letter-head on the gray paper, enclosed in our annual letter. That paper was the gift to the class of Earl Caldwell, who has recently been made assistant superintendent of one of the largest divisions of the American Writing Paper Company at Holyoke. Many thanks, to you Earl, on behalf of the class!—Charlie Thompson, the star catcher for the 1913 married men's baseball team is located in Brockton, where he and Ken Hamilton, the pitcher, are engaged in spring training for the big game in June. In his spare time Charlie is assistant superintendent and master mechanic for the Avon Sole Company, of Avon, Mass. He writes:

For six months after graduating I was with the Riter-Conley Mfg. Co., in Pittsburgh. Since then I have been with the Avon Sole Company, manufacturers of rubber fibre soles and heels. . . . I have had the building of a new factory and steam plant on my hands for the last year and haven't had a vacation. You see I'm saving it for next June.

—Al. Pastene is, or at least was when we heard from him, meeting some interesting problems in a sure enough chemical plant at Springfield, N. J. He wrote:

I hang out with the Chemical Company of America, manufacturing organic chemicals. Our output at present consists of nitro-benzol, aniline oil and aniline salt. In addition we are contemplating manufacturing other organic chemicals and essential oils. . . . I am blessed with night work, most of the time. I am called chemist-in-charge of a shift, which means, really, supervisor, or some similar thing. As a matter of fact, my most serious difficulties are mechanical ones, so "chemist" is a little of a misnomer. We have a good many new type machines, stills, nitrating and ordinary kettles etc., and have to handle acids in considerable quantity.

One of our main difficulties has been aniline poisoning. This, it appears, was little known in these parts prior to the inception of the volume of business that has developed since the war. Aniline, it appears, has a similar effect from inoculation, that carbon monoxide has from inhalation. It causes the blood to turn blue black, giving a livid color to the sufferer, and also slows the heart action considerably. The only known remedies at our command are heart stimulants and fresh air, and in extreme cases, oxygen. By experience we have learned to avoid most of the troubles we have had.

Although I am but 20 miles from New York I don't have much opportunity to get there,—these chemical propositions are fairly exacting. This is a cute country town, but it has been an awful job to get suitable living quarters. I think I am finally located now.

—Marion Rice is in the research laboratory of the General Electric Co., at Schenectady, N. Y. The following clipping will be of interest to the class:

They talk of the superman nowadays and in the same breath covertly whisper about the decline of the intellectual woman. Miss Marion Rice, daughter of the late Isaac L. Rice, railroad attorney of New York and president of the Electric Boat Company, who is working in the research laboratory of the General Electric Company, not only disproves the latter, but in her ambitions and ideals sets forth convincing evidence that the day of the superwoman is not remote.

Because of her "reticence," an interviewer was told it was doubtful if Miss Rice could be seen. After the interview was willingly granted and the reporter ushered into her apartment it was discovered her reticence was good common sense and a zeal for other things than newspaper publicity.

Miss Rice was graduated from Massachusetts Institute of Technology in 1914, and came to the General Electric Company about June 20, 1915. Aside from her reputation for originality in her work, she is said to be very ambitious. Questioned as to her aim in working here she declined to state definitely, but showed she is very much interested at present in an X-ray spectrum. She specialized in chemistry in school and college.

Miss Rice has traveled extensively both in the United States and abroad. For some time she was in the West. She goes to New York where her mother lives at the Ansonia hotel, every week-end.

F. B. Morton is chemist for the O'Bannon Corporation, West Barrington, R. I.—Most any of us would prefer being a banker on pay day, at least, but H. R. Wemple is an every day, real one. He writes:

I left engineering over a year ago and am now working in my father's bank, and am convinced that there is no money in engineering. There is a fascination about business which makes it equally as interesting as solving a problem for some other boob to make money out of. I would not have missed my experience in engineering for anything and am sorry that I did not have a little more of it before going into this work. I live in an agricultural district (Waverly, Illinois) where land

sells for from \$175-\$250 an acre, and yields from \$10 to \$40 an acre return. . . . My own experience since leaving school does not seem as interesting as some of those who have gone to Mexico or to France, and yet I wish that other fellows in the class and my course would write in their every day experiences.

Thank you for that last statement Wemple, we are hoarse preaching that idea.—Johnny Welsh is working in the experimental laboratory of the Winchester Arms Co., at New Haven, Conn.—The sympathy of the class goes out to Guy Buchanan, whose wife died last December, leaving him a small daughter, a year old.—Course X men, particularly, will recall Howard Frank, who took that course during our third year. It is with sorrow that we announce the news of his death on January 10, 1916. Since leaving the Institute he had been steadily employed as chemist at Henry Woods Son's Co., Wellesley. He leaves a wife, to whom he had been married two and a half years.

This number of the REVIEW was dedicated to reminiscences. Apparently our fellows are too much imbued with the future to reminisce, and if that is the case the typical secretary's wail will be omitted. However, while on the subject one is reminded how course VI men were distinctly and obviously impressed with the idea that theirs was by all odds the most difficult course of the fourteen. This is all by way of serving notice on the VI bunch that the rest of us are waiting to see what they have to show for it. A large, prosperous-looking turnout in June will do, thank you. Heading the list of electricals is "Goeff" Thayer, by a half inch at least. We always suspected "Goeff" of being a philanderer, and now here is the proof, by his own hand:

You may think we are lucky to be among all the "Southern beauties," but there is no such animal here. I'll take my chances in New York or Boston. However, the Boston Conservatory is represented here, which helps to prevent that homesick feeling. If you know of any one coming through Bluefield tell them to look me up but remind them that West Virginia is dry.

One ought to consult the imposing letter head of Joseph A. Tenant, consulting electrical engineer, to find out what a real busy man is capable of. Joe writes:

I want to tell you that I am the proud and indulgent daddy of a splendid seven months' old boy. He is conceded to be very handsome, and to be an exact replica of his daddy—modesty forbids me to go further. He is a Texan and a Tech's son. Can you beat that?

As to the sordid cares of business, you will note from my letterhead that I have S. & W. aspirations. At present I am lucky enough to be well ahead of the game. I am acting in a consulting capacity to the city of Houston in matters electrical, and such things are beginning to move here now. At the same time I handle the electrical work in connection with freight handling equipment, etc., in the wharves and sheds being built at our Ship Channel Turning Basin, also for four new sewage disposal plants for a new city sewage system. I am also figuring on doing some engineering in connection with the rejuvenation of a small town electric light and ice plant.

As to Boston in June, I expect to make a short trip North about that time to make acceptance test on a Diesel engine. We have not yet accepted any bid, and so cannot now state what manufacturer and hence what destination my trip will have. If I get within a day's ride of M.I.T., it will be "Take me on to Tech."

Joe is evidently on the job with both feet.—Occasionally a course VI man deserts the glorious profession of electrical engineering. Russell Atwater is assistant secretary, in the sales department, of the Lilly Varnish Co., Indianapolis, Ind.—F. H. Achard is working for the Westinghouse Company, in Wilkinsburg, Pa. He writes:

I left the research department at Tech the end of last June, intending to read during the summer and then work for a doctor's degree. Fate had it otherwise however, for I was offered a temporary job as a resident inspector on a small job in Bristol, R. I., for the Pittsburg Testing Laboratory. This job was inspecting the manufacture of some cable for the city of Cleveland and was very interesting, necessitating my overlooking the whole process from the masticating of the rubber to the testing of the cable. This job being finished, I was called to New York where I did a great deal of office work in connection with the Vladivostock Petrograd railway. However, an inspection bureau is not my ideal of a place for a permanent position and as my plans for a doctor's degree have vanished I came up here as a preliminary to entering the field of electric railway engineering.

About the first person I ran into was MacNeil, VI. He is in the switchboard engineering division. I met Chauncey Crawford walking down the street a while ago also, and had quite a chat with him.

Secretary-treasurer is the title that Ben Thomas, Jr., bears with the General Storage Battery Co., of St. Louis, of which he is a part owner.—P. LeRoy Flansburg has a heroic task on his hands at the E. I. du Pont de Nemours and Co. powder plant at Haskell, N. J., where he is the safety supervisor.—Dick Catton is on electrical construction work for the Girvin Electrical Development Co., Philadelphia, Pa.—Dick Cross, though hibernating in Massena, N. Y., is quite a chipper as ever, if the tone of his remarks is a criterion. He notes:

Your diagnosis of Massena is correct (ash—madam), though if you have only been as far as Watertown your impression is but one half as strong as it should be, for Watertown is but half way. Do I make myself clear? They claim that the winter has been an unusually mild one, and for that I am perfectly willing to take the word of the oldest inhabitant. Truly, though, the climate is fine, and very healthy, especially after Pittsburgh. People from Pittsburgh, though, do not feel at home here; they say Heaven looks too uncomfortably near. That, however, all depends on the point of view. Of course I expect to be in Boston for the Reunion.

Arnold P. Sturtevant, VII special, is an assistant in comparative pathology at the Massachusetts Agricultural Experiment Station, Amherst, Mass.—One half of course IX, *i. e.*, Bob Leshner, is now at Columbia University studying for the degree of doctor of philosophy in economics. Bob's particular line is port and harbor administration, the subject of his thesis being "The Port of New York."—Malcolm Lewis, VII, has been appointed sanitary inspector of the Montclair (N. J.) board of health.—Bob Daggett, XI, has left the New York Public Service Commission, and is now running a liquid oxygen and argon machine for the Linde Air Products Company, at Cleveland, Ohio.—W. G. Horsch, XIV, who is teaching and studying at the University of California, Berkeley, is finding his surroundings much to his taste. He writes:

I reached Berkeley early in August and soon afterward enjoyed an excellent dinner at the Technology Association of Northern California meeting, at San Francisco, at which I had the good fortune to meet Professors Tyler, Dewey and Locke, and also our classmate, A. L. Brown, II. This was a fitting introduction to the West. My work at the University of California is under most congenial surroundings. It consists first, in teaching freshman chemistry, about twelve hours of lab. work and recitations per week. The rest of the time I manage to fill in with a course in organic, another in electric discharge through gases, the chemical seminar under Dr. Lewis, and research. In the seminar we have taken up the periodic system, the subject of atomic numbers, and at present are having a discussion of Dr. Lewis' theory of the atom. . . . A letter from here would be incomplete if it did not mention the weather. All true Californians swear by it; a good many Easterners swear at it. Foggy nights and mornings are the rule during the summer; total absence of rain from May until November makes green grass a precarious proposition. During the rainy season we expect rain almost any time—and get it. The hills, in winter, are green. Such is Berkeley's climate. In fact for those people, and there are many such, whose homes are well up on the hillside, about all there is is climate (climb it).

W. A. Kemp, XIV, is engineer and secretary for the New York Steam Co., of New York City.—E. N. Taylor, XIV, is another member of the *Thirteen* army with the Winchester Repeating Arms Co., at New Haven, Conn.

Mid so much loose talk on preparedness and still looser legislation we are glad to own a classmate who has something practical to say on the subject. Lieutenant A. M. "Tom" Jones, who left us at the end of the sophomore year to become an army officer writes from the State of Washington:

I am sorry that I cannot get back East in June. However, I will keep in touch at the Tech Club at Portland, Oregon, across the river. I sincerely hope that THIRTEEN has the largest number present. I like my new post (Vancouver Barracks, Washington) very much and only hope to be able to remain here. However, Mexico is ever a menace and a few weeks may see me on Villa's trail. Since last October I have been prison officer and acting battalion adjutant. So I do my hiking on horseback, and rather enjoy the change. As regards the citizens' training camps, I wish to recommend them highly to all Tech men. A Tech man can learn more at one of these camps in a month than the National Guard could teach him in three years. Furthermore, I believe that instead of an infantry battalion, our dear old M. I. T. would perform an ever-glorious service to Uncle Sam if she raised an engineer battalion. In the near future our army engineer corps will benefit greatly by the influx of M. I. T. engineers. I hope that our class will be well represented at the exams for the U. S. Engineer Corps to supply vacancy appointments due to the increase which will undoubtedly occur this summer.

Apparently, however, instead of materially assisting preparedness by increasing the regular establishment to 250,000 men at least, with a larger reserve and conscription, if necessary, to obtain that number, we are to receive a small increase according to the old piecemeal legislation plan, and, still worse, encourage the militia and fool the people to the extent of believing that the former are fit for first line troops when, as a matter of fact, they cannot be depended upon for the third line troops. The best defense policy before Congress is embodied in the Chamberlain bill.

But remember this, some-day New England alone will be in dire need of engineer troops. Why not give the boys a chance to learn now what is to be expected of them in time of war? How? By creating an engineer battalion at Tech, asking the War Department for the equipment and instructor. It will be mighty interesting and instructive, in addition to being of inestimable value to Massachusetts, New England, and even the United States.

—G. W. Denkinger, II, who did so much to popularize the Union is now senior draughtsman for the Sturtevant Aeroplane Company at Jamaica Plain, Mass.—Everett D. Yerby, Jr., I, is assistant night superintendant of the plate and jobbing mills of the American Sheet & Tin Plate Co., at Gary, Ind.—Not a few fellows at the Institute are so situated as not to know exactly in what one class they belong. We call attention with pride to Arthur W. Vose's, I, model solution of such a difficulty. He writes:

After graduation I didn't know just who I was. I had known 1912 three times as long as 1913. I couldn't help comparing myself to a child I knew so many years ago in school. The teacher, like our secretary, was collecting statistics and asked questions as to parentage and nationality. After tears of embarrassment the little girl explained that she had lived in Massachusetts since infancy, but her mother was French, her father Italian and she herself was born in Germany. Likewise in distress I appealed to our friend the registrar for official enlightenment, and as an alumnus have never wished to belong to any other than 1913, the live class. Someone once wrote: "Happy is the people whose annals are few." Perhaps that applies equally to individuals. At any rate it would take more than "a flowery literary production" to make my autobiography interesting. I spent a few months in a city trade school; an experience to me most illuminating, but regarded by some of my good friends (not necessarily the would-be artisans) as a most deplorable waste of energy. For the greater part of the last two years I have been doing road work, which certainly has great attractions, with the U. S. Office of Public Roads. I had the opportunity of becoming familiar with Washington and parts of Maryland and Virginia, and I spent a delightful fall last year on the state highways in the Berkshires.

Louis H. Carter, a Tufts man who took special work with us in the senior year, is in Charleston, S. C., where he is superintendent of the Ashpoo Fertilizer Works.—The following item of interest has been taken from a Boston paper:

Dr. Donald B. Armstrong of New York, has been awarded, together with Mrs. Armstrong, the prize of \$1,000 offered by the Metropolitan Life Insurance Company for the best pamphlet on social hygiene for boys and girls. Dr. Armstrong came to Tech with a Ph.B. from Lafayette, and M.D. and an A.M. from Columbia. At the Institute he received his degree in biology and public health in 1913. Since this time he has been connected with the Association for Improving the Condition of the Poor in New York, in which he is now the director of the Department of Social Welfare. Mrs. Armstrong, who is his collaborator in the prize essay, was formerly a sanitary inspector of factories in New York.

R. K. Wright, VI, is assistant to the superintendent of electrical construction of the Eddystone Ammunition Corporation at Eddystone, Pa.—Joseph Oppenheim, V, is in the furniture business, as a member of the firm of the Ideal Furniture Company, Cambridge, Mass.—"Hez" Holmes, X, is back in the paper business, as salesman for the Birmingham & Seaman Co., of New York City.—The class secretary will change his occupation shortly, having taken a position in the plant of the Buffalo Weaving & Belting Co. of Buffalo, N. Y., beginning May 15.

Remember June 12, 13 and 14!

Address Changes

F. H. Archard, VI, 106 Colonial Apartments, Wilkinsburg, Pa.—Walter W. Alley, IV, 3 Walnut Court, Pasadena, Cal.—R. A. Allton, XI, 535 Willow St., Winnetka, Ill.—A. R. Atwater, VI, 1239 North Delaware St., Indianapolis, Ind.—A. E. Bellis, X, 576 State St., Springfield, Mass.—B. E. Brooke, IV, 83 Madison Ave., Newtonville, Mass.—C. W. Brown, XIV, 400 Mansfield St., New Haven, Conn.—C. L. Burdick, III, Droysen St., F., Charlottenburg, Berlin, Germany.—L. H. Carter, special, 2½ Lamboll St., Charleston, S. C.—R. B. Catton, VI, 1728 Chestnut St., Philadelphia, Pa.—J. P. Coe, X, 2316 Andrews Ave., New York City.—T. R. Collins, X, 420 West 119th St., New York City.—C. A. Crawford, 210 Temple St., Pittsfield, Pa.—Zenas Crocker, Jr., IV, VI, 497 Beacon St., Boston.—R. G. Daggett, XI, 1910 East 79th St., Cleveland, Ohio.—Albion Davis, I, 1027 Leighton Ave., Keokuk, Ohio.—S. H. Davis, VI, 86 Windsor Ave., Hartford, Conn.—G. W. Denkinger, II, 14 Harris Ave., Jamaica Plain, Mass.—F. W. Eaton, XIV, 44 Dover St., Worcester, Mass.—P. Le R. Flansburg, VI, Haskell, N. J.—G. W. Forrester, X, 243 Oak St., Holyoke, Mass.—R. S. Gans, II, United Auto Sales Co., Baltimore, Md.—A. T. Gibson, III, Oxnard, Cal.—H. O. Glidden, IV, care of L. H. Field, Jr., People's Nat. Bank Bldg., Jackson, Mich.—A. C. Goodnow, X, Waukegan, Ill.—L. C. Hart, XI, 6459 Dante Ave., Chicago, Ill.—R. B. Haynes, I, 558 West 113th St., New York City.—E. Hurst, II, Montour Falls, N. Y.—G. H. Jones, IV, 558 West 113th St., New York City.—A. E. Howlett, X, 536 West 114th St., New York City.—A. Katz, XI, Hotel Lenox, Springfield, Mass.—F. H. Kennedy, Jr., IV, Route I, Box 24, Pasadena, Cal.—I. W. Knight, VI, 1310 Elmwood Ave., Auburn, R. I.—G. T. Lane, V, 1 Church St., Great Barrington, Mass.—Lieut. L. H. Lehmaier, 4th Battalion, 1st A. I. F., Egypt, Africa.—D. E. Lewis, X, 64 Henry St., New Haven, Conn.—M. Lewis, VII, 4 Claremont Pl., Montclair, N. J.—F. B. Morton, X, 41 Angell St., Providence, R. I.—R. E. Palmer, II, care of Consumers Co., Chicago, Ill.—J. N. Paul, VI, 33 Lozier St., Rochester, N. Y.—H. D. Peck, II, 11 Florence St., Marlboro, Mass.—Charles W. Rieser, X, 61 Pleasant St., Holyoke, Mass.—G. M. Rollason, X, 448 Columbia Ave., Palmerton, Pa.—N. M. Sage, I, 175 Edwards St., New Haven, Conn.—M. W. Salomonson, IV, 144 Harvard St., Newtonville, Mass.—P. Schmidt, III, 2255 Mahoning Road, N. E., Canton, Ohio.—S. W. Selfridge, Garfield, Utah.—M. J. Shafran, V, Box 636, Tamaqua, Pa.—S. D. Shinkle, V, 357 West Emporia Ave., Wichita, Kan.—H. L. Shoub, VII, 1926 New Hampshire Ave., Washington, D. C.—E. E. Smith, 2d, VII, 2530 Bell Pl., East Walnut Hills, Cairo, Ohio.—A. P. Sturtevant, VII, 41 Lincoln Ave., Amherst, Mass.—P. B. Terry, X, W. Center St., Woodbury, N. J.—R. C. Thompson, X, 87 Glenwood Ave., Brockton, Mass.—C. E. Trull, VI, 604 Main St., Woburn, Mass.—

R. J. Tullar, II, 620 Blackburn Ave., Sewickley, Pa.—G. R. Wallace, Jr., 56 Prospect St., Fitchburg, Mass.—C. P. Wetherbee, VI, 134 Elm Ave., Ardmore, Pa.—P. G. Whitman, III, care of Pike Hill Mine, Corinth, Vt.—R. K. Wright, VI, Box 251, Ridley Park, Pa.

1914.

CHARLES PARKER FISKE, *Sec.*, 99 Aspen Avenue, Auburndale, Mass.

ELMER E. DAWSON, JR., *Asst. Sec.*, 28 Washington Avenue, Winthrop, Mass.

FORGET IT? NOT MUCH! I SHALL MEET YOU, AS PLANNED, JUNE 12, 1916, AT 9 O'CLOCK ON ROGERS STEPS.

The secretary wishes he could impart to each and all of you the wonderful enthusiasm that is being worked up about the Reunion by those who know of its ever increasing splendor and grandeur. It is to be beyond comparison or parallel. You simply must be here to enjoy its continuous appeal to your sense of a good time. Miss it if you will! We advise you to read all the literature on the subject—consider it half said—pack your grip and be here.

Fourteen was well represented at the annual dinner held at the Copley Plaza on January 8, the following men being present: A. F. Graham, W. C. Eberhart, A. W. Devine, A. W. Johnson, A. H. Miller, C. R. MacKenzie, S. J. Spitz, C. P. Davis, A. W. Mudge, Jr., E. E. Dawson, Jr., L. L. Downing, C. J. Callahan, C. P. Fiske, F. C. Atwood, J. A. Root, and C. A. Corney.

Lester Downing at that time told the secretary—it being news to him—of his engagement to Miss Elinor Haines of Cambridge. Downing has been with a number of firms since graduation, having drifted into the ship brokerage business with Crowell & Thurlow, 131 State street. He is working into the steamship end of the work and is getting along splendidly.—A. F. Graham has a position with the B. F. Sturtevant Co., in their aeronautical department.—John A. Root is still with Cram & Ferguson, architects, in Boston, and he seems to find business very busy at present.—A. N. Henricksen is reported as being employed by the Remington Arms Co. in Bridgeport, Conn., in their testing laboratory.—Nat Brooks is a salesman for the Goulds Mfg. Co., makers of steam pumps, 58 Pearl street, Boston.—J. E. W. Giffels is designing power plants for a firm of consulting engineers in Lowell, Mass.—J. A. Judge is reported as being with the Highland Paper Co. in Holyoke, Mass. We have heard that he is manager of the plant.—C. J. Callahan did not like his job as New York assistant secretary, so he promptly moved back to Boston.—S. J. Spitz, with the Avery Chemical Co. of Lowell, is becoming a regular chemist and will soon be able to put on the market all those chemical

concoctions usually made in Germany, but which are so hard to get now-a-days. We were glad to see him make the trip from Lowell to the banquet.—A. W. Johnson has changed his vocation to the paper business and is located in East Walpole with Bird & Son.—Louis A. Wilson is reported as having accepted a position with the New Jersey Zinc Co. Is this right Louis?—J. W. Horton has passed civil service examinations and is now located at the Naval Testing Station, Indian Head, Va.—Chauncey Ruoff is addressed as "Sergeant" now and is located in the Philippines.—Gordon White has moved to Chicago with the same firm of consulting engineers, Sloane, Huddle, Feustel & Freeman. He expects that the nature of their contract there is much the same as their work here, making an inventory and appraisal of the Bay State Street Railway system.—Art. Peaslee and Phil. Morrill, both with the Bemis Bro. Bag Co., decamped with almost no warning and are now in St. Louis. Art. says he hopes to be here in June. We all hope that both he and Phil. can see their way clear to make the trip.—"Doc" Leslie is doing research work for the Submarine Signal Co., with which company he has been connected since graduation. He has fitted out a laboratory for himself and is getting along famously.—"Gus" Miller, who was at the dinner, happened to be on here from Detroit, where he is employed by the Norton Co. We were all glad he happened in when he did.—C. P. Ness writes from Globe, Ariz., that he has a position as assistant geologist for the Old Dominion Copper Co. This would seem, in view of the good opinion held of the company, and the condition of the copper market at present, to be a splendid position.—Don Douglas is doing great things in the aeronautical world. He has just designed a giant hydro-aeroplane for Porter H. Adams, who attended the Institute a couple of years as a special student, in which Adams, with a crew of six men, is going to attempt a trip around the world. It is expected that the machine will be ready about May 1.

The call for reminiscences resulted in one good yarn and the mail also brought in several letters from foreign countries that are of unusual interest so we have an opportunity to recall the old days and then read about the adventures of loyal Fourteeners at home and abroad. The secretary's announcement of his engagement seems to have encouraged others as F. P. Gilbert encloses the card of Miss Ethel May Poland with his; Mrs. John Richardson Beach of Detroit announces the marriage of her daughter, Elizabeth Maryette, to I. H. Lovett; H. B. Richmond sends in the announcement of the engagement of his sister, Miss Ruth Adelaide Richmond, to George K. Perley; the wedding of Miss Margaret Dow of Haddam, Conn., to Samuel Breck, Jr., is mentioned in the *Brookline Chronicle* and the *Barnstable Patriot* congratulates Miss Esther M. Crocker of Falmouth and "Doc" Swift on their engagement. A reminiscence is headed, "Somewhere in France, Janu-

ary 1, 1916," and may have been inspired by a lonely vigil 'neath the stars, but as it is signed "Mysterious Mr. Smith, Jr., M. I. T. '14," we cannot vouch for it.

From time to time and *vice versa* I have read in the TECHNOLOGY REVIEW the reminiscences of undergraduate days. In order to show that the class of fourteen does not need thirty or forty years to brew such epistles, I purpose to go back to the good old times and tell of our schoolboy days when Tech was a four-cylinder Institution (then our canny Prexy had not separated Mr. Smith and other arista crooks from their nefarious pelf in order to be wealthy enough to be annexed by Harvard). In those dark days the bar at the Westminster was not exposed to the vulgar and unsympathetic gaze of the passing prof. and many a student dropped in at that haven of refuge to discuss politics, literature, and humanity and at the same time prime his engine and partake of lunch. Dave Carb was then writing plays as fast as they were rejected and he sure had all of the eccentricities of a genius. I well remember my freshman year as one constant parade around the circuit of the dean's office, Walter's office, Waldron's, Andy Mac's, and the good old drug-store (the official headquarters of the Shedd twins). In those days we were not for preparedness as our enthusiasm for drill plainly showed. As we progressed along our path of learning some of our beloved classmates were dropped by the wayside, some having invoked the wrath of that czar-like body of men called the Faculty and others just quietly easing out when they felt the call of Bacchus and Whitelittus more strongly than the lure of the slide rule.

In those days Tech night and Junior Week were not the law-abiding events they now are, and even now I have visions of Prize Drill night when the band proved itself worthy of the name and fame it earned through its capacity to produce liquid tones.

As the years passed we came to recognize among us certain individuals of character and distinction; how well I remember Charles Fiske and his coat of many colors, and what a sensation it created on the Wellesley campus. (Charley always was pretty sore that Tech should have joined Harvard rather than Wellesley.) Having just heard of Charles' engagement I fear to think of all the sad and broken hearts it has caused; for, in his day, Charles was the pride of the 'Stute in drawing-room and at tea. And there was old Sousa Brooks with leather lips and shining trumpet; could anyone have kept him from playing on that wind instrument? I wot not! And, again, what a manly and military figure was Dinny Chatfield who was equally at home with the saber or slide rule. I understand Dinny was seen on that early morning car from New Haven a while ago limping on both feet, fallen arches having come on him just as soon as he deprived his insteps of the constant support of the bar rail. Then there was Dick Favorite who did more work for many a good loafer than ever they did for themselves. Dick was there in every way. And old Ban Johnson and his side brick Jones, was ever there a pair better qualified than this to give an expert opinion on the relative quality and size of the commodity known as free lunch? And as for Bob Doremus and Charles T. Main Crittenden, were ever there any more intellectual men in our august tribunal? I pause for a reply. Boggs Morrison, bless his soul! was he not a man of good cheer and ready wit and, withal, a chemist of renown and fame? I have always believed that the thesis that he and Skip Dawson got away with was a masterpiece of its kind. And Skipper Dawson, the man of the hour; a good judge of sailing craft and a worthy pilot for any schooner. Skip was a good boy but he kept bad company. And MacLeod an athlete and man about town, why he did more for hockey than John L. Sullivan did for the ring. My eyes grow dim with tears when I think of those great men and the menial labor they now perform. There was Red Treat and Freddy Cairus, men whose names are forever honored, for did they not pull off a prize fight in Symphony Hall where 93.7 per cent. of the celebrated Boston culture is kept? And Casey Wells, one of nature's greatest noblemen; in those days we used to rub elbows on the same mahogany slab with him. My! but Casey could sing; many a time his deep *basso profundo* has brought crowds to his side; and some of them purchased too. I believe that the corner of Exeter and Boylston streets is now known as Casey's corner and that a subscription is being promoted to erect

a statue on that famous spot to his beloved memory. Casey is now running a zinc plant in Utah and finds time to look the Mormon stock over occasionally.

Art Peaslee, a hard worker, athlete, and gentleman was one of us then. George Beach, another Apollo, was then in his prime and known as an upright young man, a model for freshmen to follow. And old Jerry Blakeley, since fallen to an assistant in a heat lab., was then seen about town with sporting men and hailed by policemen and soda clerks alike. Otto Fick and Doc Leslie were among us then and a better pair of men never wore shoe leather; now Doc is making submarine mermaid traps and Otto is lending dignity to Chicago. Who of the Course II ruffians will forget that famous firm of Giffels, Gazarian, and Goldenberg? Why, if it hadn't been for Dean Fales those boys never would have gotten through mechanical lab. And speaking of Dean Fales, there was a man who believed in advertising. Why that old growler he used to ride around in and the drum he used to play had it on a circus. And Freddy Hurlbutt, a hockey player of note and always busier than a bird dog. Why, when that body of embryonic engineers gathered to hear Pa Haven exercise the language there was action. Wasn't it Zenner Marsh who won undying fame by calculating the stresses and strains in a clothes pin? Then we had the two Bills; McEwen and McPherrin, the former an artist and the latter an orator; Dave Sutherland, a man with a way with the ladies and an intellectual giant; Gordon White, a sporty feller and a snappy dresser. The girls at the Art school all stood on the steps to see him pass no matter how cold the weather. And good old Count Mason now fighting for his country, a rare man and a prince. The Count as a "worry" critic was second to none. Charley Thompson and his follower, Sinnicks, could there ever be two more ardent students than these? Nay. And their little comrade, Art Mudge, a shifty man on his feet at times and a disciple of Charley Cross. We were not without our journalists then: to wit, one Waite, as active and at times as welcome as the well-known California flea. And Bull Owen the old war horse; a married man, but an athlete and a swimmer and a good companion. Then we had Tallman and Salisbury, the vocalists; why, if those boys aren't selling fish or peddling clams they are wasting their lives. And Jimmy White, the man who made Ireland more famous; and in Boston that means he was there. Don Crowell, who had a happy smile and a cheerful word for everyone, he was a credit to the wielders of the guessing-wands. And Buck Dorrance, a man of men, whose ability as a leader both among society folks and Tech studies made him the great soup taster he is today. Walt Keith and Bill Price, familiar to the Newbury street cliff dwellers and pleasing sights to the eye; then we had Eichorn and Charley Fox, a couple of athletes (they admitted it). Who will forget Leathers, the Ike Newton of the Institute, who for lack of an apple used a brick of the good old Hibernian sort to bring notoriety and fame to the hydraulics class. There was Shedd, the actor and jester, whose aim in life was to get a job picking flowers off century plants. There was Whitwell, an engineer of ability; and Les Snow, a man who made your respect for Dartmouth increase. Tom Duffield, the class's heaviest eater. Was not our classmate Guething, the runner, honored with a nick-name that meant much to us all? We had Peb Stone in our midst then, and a true engineer he was. I heard that he was building a dam in Maine. I don't know about the building part but dam and Maine go together. And Tom Huff whose experience with the hurdles led him into the aviation game. Why now he can talk about drift, and lift, and propeller efficiency like an old timer. That's what comes of drinking a glass of light beer with a fly in it.

Who of us can forget Arlo the great, who fairly oozed and dripped of Elizabethan literature? Many of us remember Harry Tyler with his green bag full of integration signs, but when he got to discussing his students he always differentiated, yea even unto FF degree. Then there was a pair called Allen and Breed whose nefarious deeds in Course I are deserving of special mention in the hereafter.

In spite of our oppressors we had friends; to wit, Blackie, whose quaint ways will ever be remembered with love and respect. Charley Cross, whose love for Ike Newton and the 'Stute were great, will always be remembered for his marvelous experiments with the cat skin and ball on a string. Have any of us in later years ever heard a better speaker than Doc. Talbot? Why W. J. Bryan at his best could not rival our lectures in chemistry.

Then there was Hot Wire, as able a man as ever tossed ohms and ampères about. There were few of us who did not like and respect Burrison and his co-worker Gideon; they did much to make descript bearable. Does any one remember Dewey and his unruly button? Yea, verily! And Prof. Miller whose common sense won the friendship of all. Some of our classmates can scarce forget Boiler Bill and his flow of words; why when he opened his mouth and started to sing himself to sleep the foreign population in the class passed, no vocabulary they ever saw had half of his stuff, perish the thought! No! Old Joe Riley could hold his own when it came to flinging around formulae, but when Berry got started on theory he was in a class by himself. Prof. Gill and Norton, the heat engineer, were two good men and true, but when they fooled with explosives and temperatures hottern'ell, respectively, we used to pick our fire escape. The one bright spot in the mining engineer's life was Richards, a man from his shoes up. Who was our Apollo? Why Hydraulics Russell, of course; he might well have posed for any shirt or collar ad. To go back a bit, weren't Passano, George, and Bartlett a trio that could inspire fear in the youthful breast? And who of us does not look back with pleasure upon our association with Docs, Moore and Philips? I could go on for many pages about our beloved instructors as their idiosyncrasies seem firmly stamped in my mind, but as my eyesight is not what it used to be in my youthful days and pen grows weak I must cease.

We will many of us gather at the dear old 'Stute this spring to usher out the old and ease in the new and when the class of Fourteen gathers on 'dear old Roger's steps' to sing "Tenting on the old Camp Ground" the rest of the alumni will know it. I wonder if they will take that flock of pigeons over the river, too?

Hen Merrill writes under the head of The Board of Conservancy Works of Kwantung, Canton, China, but it would appear that he had better make his chief concern the conservation of his own hide.

I am very glad to hear of your engagement. Please accept my congratulations and best wishes. It is when such news reaches me that I become envious of you at home and bemoan my fate of having to live in a dirty Chinese houseboat without seeing a white person for weeks and occasionally months.

I am now working from Kongmoon to the sea through a very rich and fertile delta. Wherever there is wealth, there are pirates and this region is infested with them. Our houseboat is guarded by six soldiers and we have another guard of six to accompany us on our work. The pirates usually are content with holding up and robbing steamers and coolie boats, but just at present they are attacking villages. Yesterday, while out hunting a bench-mark with one Chinese assistant, we started towards the gate of a village. When we were within 300 feet, I heard the report of a gun and a bullet whistled overhead. Just behind the gate, I saw a lot of glistening gun barrels and occasionally a man's head dodging up and down. Finally a man stepped out and waved to us to go away. We did—I consider that our retreat was fully as strategic as the great Russian retreat, as we did not lose a single man—that is both of us got hurriedly and safely out of range. We met a villager, explained our case to him and he succeeded in gaining us admittance. They explained that pirates had bothered them lately so they were not allowing any strangers in. I am glad to say that we will leave this region in about a month. Then I expect to be in Canton for the winter working up results of the summer's survey.

Arthur Todt is also in China and writes us from the Hongkong establishment of the Standard Oil Co.:

Just to show that though I am far, far away I have not quite lost touch with the days gone by I shall send this note to let you know how the world wags here.

I arrived a couple of weeks ago and am now comfortably installed in the Construction Department, more or less. Primarily I am the marine architect of the office but that job is at present way below par and I am dabbling in other work. I am supposed to be an oil engine expert also and to fix up any of our engines which may get tired when they do not deserve any vacations. I have one at one of our

local plants with which I am at present occupied. On the side I recently finished some tests on candles. The regular man was extra busy and so I was put to helping him. He goes away soon and has left me directions for a second series of tests. I am to supply all the how and where of the job, he supplies the what and why. Thank the Lord for an M. I. T. education, for we have neither apparatus nor laboratory and it is practically impossible to get the former out here. We do our light weighing on postal scales and our hot air oven consists of a five-gallon kerosene can sitting in a bath of water. The rest of our stuff is improvised along similar lines. We get the results just the same.

The Construction Department proper is made up of quality, not quantity, and as two of the four of us are on absent duty for an unknown period the two here have to cover the ground thoroughly. We do anything from erecting a complete plant, tanks, warehouses, piers, and pipes to putting a bird house in a tree to please the superintendent's children. We have a landscape garden on hand at present, repairing a house, building a bungalow on a mud flat, and two motor boats besides. You can readily see that there is no lack of variety in this job.

My trip out was leisurely in the extreme and I reached here eleven days behind schedule. To begin with our steamer was delayed for repairs in the United States and sailed four days late. We came on the northern route, Seattle to Yokohama direct. We lost two days more crossing and reached Yokohama two days before Christmas. We had a rough passage though only two real live storms. We were on a small vessel and she was bounced around considerably. One storm was at night and in the course of it a fat wave rudely climbed on board, smashed in a stateroom door and flooded the place. It was occupied by an invalid lady and her husband and she had rather a shock. My room-mate and I had a dry place to offer them, fortunately, and we did so, afterwards testing the softness of the lounges in the dining saloon where we were perfectly comfortable.

We had a jolt in Yokohama, where instead of continuing her voyage the steamer went into dry-dock where we awoke Christmas morning. We all left her and changed to other steamers. I was held up for eight days in Yokohama and saw enough of the place to say I have been in Japan as I went to both Tokio and Kamakura. I was carefully watched, too. Each foreigner who goes to Japan has to give his address, age, occupation, destination, and various other particulars, at frequent intervals and it gets to be a bit monotonous.

I was rather disappointed in Japan as a whole. It looks dilapidated, both houses and people, it is dirty outwardly however clean the interiors of the places may be, and the sanitary layouts of the cities are yet in the dim future. It would do no harm if a few Japanese spent four years (or more) each on Course XI. Fujiyama is, however, well worthy of its reputation. It was the second thing I saw when I looked out the first morning in Yokohama. I do not wonder that the people there regard it so highly.

For double distilled class spirit we always relied on Alden Waitt. On the stationery of the School of Chemistry, State University of Kentucky, Lexington, Ky., he sends us an object lesson in loyalty. Our humble apologies to you Alden, for confusing you with 1915. You may be assured of all consideration due a 1914 man in the future:

For some time past it has been my intention to drop the class a line regarding my whereabouts and upon receiving the January issue of the REVIEW this evening I decided to do it now. I am writing now, however, with a purpose, and that is to disabuse the minds of any who saw a letter in this last issue of the REVIEW purporting to come from me, regarding any responsibility of mine in sending it.

On the level, it seems as if the fates were working overtime to sever my connection with our best of all classes. Under the 1915 news I saw a letter under my name and written as if to the class of 1915. It was one I had written to one of the fellows up home. In the first place the letter was not written for publication, in the second place it should have appeared under the 1914 news if anywhere and finally it was rewritten.

Now I'm not writing any letter to a class to which I do not belong. I'm a member of 1914 and always will be if I have anything to say about it. There's no other class for me but '14, and here's a dollar enclosed to prove it (if dues have gone up let me know), and now when a notice goes out to the class I want to get one. There that's off my chest, but, see that you put me with the rest of the fourteeners, the elect, the chosen, the favored of the Lord.

The time that I've spent here in Lexington has passed very pleasantly and the work has been going along in great style. It is a little hard at times to realize that I'm teaching instead of being at the other end of the horn, but I guess that I'm getting away with it. The fellows would pass out cold if they could have a look at this ex-flunker panning the studes and sermonizing on the virtues of study. It's a big laugh to me, and the students themselves have a chuckle over it when I'm not looking. This term the work has been keeping me on the jump every minute, for in addition to three regular recitation sections, several more lab. sections and the work that goes with them in general chemistry I am assisting in giving the course in synthetic inorganic chem. and it is some job.

I haven't yet located a Tech man anywhere around here. Rucker Bristow, who was in Course X, is located somewhere in the state but I don't know just where.

The dates June 12-14 have been tucked away in my memory with a big sign "Reserved" on them. I sure am looking forward to the big Reunion and a chance to see the crowd once more. Fourteen should have a large party of its own at that time, and you fellows who are working the steering gear don't want to forget that we've got to show 'em all that '14 is still unbeatable.

The science of *aëronautics* has made wonderful progress in the last two years and H. K. Chow has done a great deal for it and made a name for himself judging from the December 6 issue of the *Aerial Age* which publishes an article by him entitled "Damping the Oscillations of an Aeroplane." He also favored us with a letter.

Pardon me for the delay in answering yours of the 13th instant. I left the Curtiss Company about the middle of this month, and, for the last two weeks, I was on the road preparing to sail from this port for China, on the 1st of January. While in China I shall see what I can do for you in matter of reporting the doings of the Chinese Tech alumni in China.

For your information, I might say that a few days previous to my departure from Buffalo, I was requested to deliver a lecture on *Aëronautics* before the employees of the Curtiss Aeroplane Company. About 150 people were there. Dr. Zahen introduced me and I finished the talk in an hour and a half illustrated with lantern slides. And the night preceding my departure, my associates gave me a farewell banquet in a hotel. About fifty people were there. Technology is being pretty well represented in the Curtiss Aeroplane Company. The management has high regard for Tech men.

My future plans in China are not settled but I expect to make good in ten years. Let us watch and see.

By the way, I wrote an article in the December 6 issue of *Aerial Age*, New York, on the "Damping of Oscillations of an Aeroplane." Again not conscious of boasting of my own record, I am going to be the first recipient of a gold medal awarded by the Aero Club of America to a meritorious student in Aeronautical Engineering in M. I. T.

H. B. Richmond speaks of the New York delegation in addition to announcing Perley's engagement. He writes that his address will now be General Vehicle Company, Inc., Long Island City, New York.

Ricker, VI, and Shepard, VI, are here at the Y. M. C. A. I dare say nothing about it but judging from pictures and voluminous correspondence you will some-

day have two more news items to add to your list. Ricker is with the Western Electric and Shepard started in Wednesday with me at the General Vehicle Company.

There are a lot of M. I. T. fellows in town and am running into them every day, Newton, Wentz, Owen, Hines, Borden, are some of the 14ers that are around besides those at the Y. M. C. A.

I have been up to Boston a couple of times but have been pretty busy each time, but am saving up now for some dynamite to break away with for a few days in June when the big doings are on.

Old Red Treat says:

A few of us will have to hold up the stag delegation of 1914 and I'm in for doing my share, for a few weeks at least.

But, be that as it may. I thank you for your congratulations of a different specie, even though they were hardly in order as you greatly magnified the duties of said job (not position). However, it is fine to keep in touch with Old M. I. T. as is somewhat necessary.

As to stirring up enthusiasm among 1914ers here, it is hardly necessary, for every one of us is all of that and then some. I will, however, be glad to do all that I can in getting the bunch together and working right. I am at your service in whatever is being planned for class activity.

Next Saturday we are all anticipating a "time" in Cleveland, as the Cleveland Club is giving a party for the rest of the Northern Ohio Association at the Hermit Club. It looks like a big night but there is nothing to do 'till Monday, so "who cares what comes after."

Everything is going finely around here and the boys are all getting along mighty well.

No, Syme Baird, we haven't been waiting for letters so long yet that we are greatly surprised when they come although we may reach that condition if some of the boys do not brisk up.

You will, no doubt, be somewhat surprised to hear from me. But I want to let you know where I am and also any of the boys with whom you come in contact.

Have been with the Ferro Machine & Foundry Co. since early in December after a year in Detroit, with Northway Motor Company.

Guess that I am in the automobile game to stay. Have specialized in efficiency and we are installing a new system here. I am supervisor of equipment, maintenance and repairs. Have a great lot of experience and will land something worth while before long.

F. P. Gilbert certainly qualifies in the public service class:

I accepted the position as assistant superintendent of the Water and Sewer Departments here the first of November. Previous to that I was acting resident engineer for the Maryland State Department of Health with an office at Easton, Md., and having as my territory the eight counties comprising what is known as the "Eastern Shore." This work was extremely interesting as it allowed me to travel most of the time and see everything of interest, technically and otherwise, in the district.

I came to Freehold for the purpose of improving the construction, operation, etc., of the water and sewerage systems. The work is quite varied in character including sewage disposal plant supervision, steam power plant re-design for economy, a complete survey of the town and vicinity besides various routine problems of management, construction, etc.

Doubtless you know that C. E. Fox went to Serbia for the purpose of fighting typhus fever. I noted recently by a New York paper that he was in Uskerb when it was captured by the Bulgarians. I have not heard from him since June and have been unable to write not knowing his address.

A genial wail is Pet Stone's answer to a request for a ready made stunt for the big celebration, so everybody is requested to light

his pipe and dope out some suggestions for the two humorists of New Haven:

After receiving your letter, Boggs and I put our heads together over a stein of Mûnnchner and consoled with each other that of all the men in 1914 you and Skip should have picked on two such innocent and peace-loving animals as we are. However, both of us having rubbed against several of the earth's rough corners and thereby having acquired most magnanimous dispositions, we are firm in our desire to heap coals of fire on your head and *produce*. The number of '14 men in New Haven is large, and by careful and watchful waiting we hope to crib a brilliant idea or two from the unsuspecting classmates and brush it up with a little of Bogg's lull and secure results which shall make all men herald 1914 as the one best bet—all other engineers beware.

Now if either you or Skip should wish to offer any suggestions you have our permission to render same in writing and we'll turn them inside out, select the fitting ones, incorporate them in our "idea," and swear they're our own. There are only a few to whom we'll allow that privilege so get in before the crowd.

Yes, Charles, I blew into New Haven the first of December and along with most of the Rip ogenns organization, was turned over to the W. R. A. Co., to install machinery in new buildings. Now I spend all my time endeavoring to keep shaved, to prevent a white collar from chafing my neck, and to conceal a most fluent line of profanity picked up in the sticks. It's an awful change to spring on a man when you take him out of cold storage in the woods and set him down in an office where you can't swear without shocking a steno and have to call everyone "Mr." when oftentimes you want to call him—. But Boggs and I have decided that "lull is the thing" so we're both endeavoring to develop a good line of it.

We saw Yale trim our hockey team last Saturday, sad to state. Johnny Welch, and Stan Churchill made up the other half of the Tech cheering squad. We hope to arrange a little group of '14ers to take in the dinner at New York on January 29.

L. S. Hall has been traveling about a bit and writes from Cincinnati:

I don't remember exactly where I was the last time I wrote to you but I believe I was in Washington just after returning from California. Anyway, that is where I will start from. I was in Washington from January 15 until the first part of April when I had an order to go to Yarmouth, Me. So I went to Yarmouth. It isn't such a bad place, in fact, I liked it there first rate.

I stayed there until the latter part of July when I resigned my position with the Government and accepted one with G. B. Howard & Co. of Nashville, Tenn. Before going down there I came home for a few days, and on my way down there stopped off at Niagara Falls to see the sights.

Mr. Howard, with whom I had my position in Tennessee, is a Tech graduate. He had a contract for some highway work in Humphreys County, so most of my time in Tennessee was spent in McEwen. It is the highest place between Nashville and the Mississippi River. That is about all that can be said about it.

I stayed there until shortly before Christmas when I came to Cincinnati. I now have a position with the Ferro Concrete Construction Company of this city. There are quite a number of Tech men connected with the organization.

We do not think that Dana Mayo writes fully enough, for while he speaks of 2400 H. P. boilers and special machinery he fails to mention the construction of jitney submarines and the Oscar II.

His letter is headed Avalon avenue, Highland Park, Mich.:

Have been with the Ford Motor Company in Detroit ever since I left school, drafting, designing, and looking after construction work on their new power house. It is very interesting work, as a great deal of the machinery they are putting in is of entirely new design. We have the largest producer gas engines in the world here, the first combination gas steam engines and we are now working on some

2400 H. P. boilers which will be the largest in this country. We are busy all the time working Saturday, Sunday and holidays and as they are planning to double the plant here, it looks as if we would be busy for some time to come. We have about 120 Tech men in Detroit and we get together quite often; have just started regular lunches here. White and Barber and a couple of '84 men are here in town and Swift, '15, is taking an apprentice course at the factory. Everybody here seems to be planning for the Reunion and it looks as if a large bunch would come East in June.

Nel Baxter writes from Peoria, Ill.:

My November REVIEW came some time ago and I was, of course, glad to get the news.

I am still with the same people—making gas tractors. We have made two large additions to our plant and shall probably make more before long.

I am sorry I haven't any news in reply to your ever present plea for the same, but my activities have been very limited with the exception of a couple of trips to Chicago and St. Louis.

C. H. Wilkins announces that he will be at the big time in June in spite of the fact that he is in munitions work with the Remington Arms Company at the Eddystone, Pa., Works where he went from the Ilion, N. Y., Works of the same company.

The following clipping was received from the *Hull East Wind*.

Mr. Edward E. Murphy, son of Mr. and Mrs. James Murphy, a graduate of Tech, who has been associated with the New York State Highway Commission, has accepted a position in Boston where he is in the department of ferry and bridge design. Edward's many friends here are pleased that he is again so near home.

Address Changes

P. H. Adams, Engineers Club, 2 Commonwealth Ave., Boston.—F. L. Ahern, 1228 Woolworth Bldg., New York City.—E. P. Alexander, 418 Manhattan Bldg., Duluth, Minn.—H. H. Ambler, care of Edison Ill. Co., Whitney Bldg., Detroit, Mich.—R. H. Anin, care of Aberthaw Construction Co., 27 School St., Boston.—F. C. Atwood, 316 Huntington Ave., Boston.—L. S. Baird, care of The Ferro Machine & Foundry Co., Cleveland, Ohio.—H. W. Barker, 364 Bewick Ave., Detroit, Mich.—R. F. Barratt, 133 Harrison St., East Orange, N. J.—R. DeB. Barlett, 129 Angell St., Providence, R. I.—F. C. Batchellor, 1790 Broadway, New York City.—R. D. Bates, 15 Clyfton St., Plymouth, Mass.—G. A. Beach, Cali, Colombia, S. A.—G. H. Beard, 5100 Nicollet Ave., Minneapolis, Minn.—P. F. Benedict, U. S. Coast & Geodetic Survey, Washington, D. C.—C. M. Berry, 7 Norris St., Cambridge, Mass.—F. W. Bommer, 225 Spencer Ave., Chelsea, Mass.—E. W. Bowler, care of U. S. Geological Survey, Washington, D. C.—H. L. Bowman, 825 East Chelton Ave., Germantown, Philadelphia, Pa.—E. M. Boyd, 11 Grampian Way, Uphams Corner, Mass.—N. E. Brooks, 381 Moody St., Waltham, Mass.—C. D. Bryant, 189 Bellevue St., Newton, Mass.—C. J. Callahan, 14 Prospect St., Lawrence, Mass.—H. N. Calver, Trudeau, N. Y.—H. M. Campbell, 3163 Niles Ave., Cincinnati, Ohio.—H. T. Chandler, care of Ford Motor Co., Detroit, Mich.—C. H. Chatfield, 509 Willow

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TILL JUNE, THEN!

1915.

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FRANCIS P. SCULLY, *Asst. Sec.*, 1802 Massachusetts Avenue,
Cambridge, Mass.

Our first alumni dinner was held February 26 at Louis' Restaurant and seventy-six of the faithful demonstrated that they were earning enough to pay for a good meal. The bunch began to arrive about six-thirty and from then until seven-thirty the time passed in greeting old friends and swapping experiences. Enthusiasm was at a high pitch and immediately after sitting down to enjoy the repast the cheering and singing which was a feature of the entire evening, commenced. Ike Litchfield, '85, our guest of the evening, had some new cheers on tap which will probably become familiar to all of us at the Reunion.

At the close of the dinner President Jack Dalton spoke for a few minutes on general topics connected with the class and then

yielded the floor to Bill Spencer who rendered his financial report. This was not any too rosy and indicated that the dues have not come in as they should, especially as the Reunion will plan quite an expense on the class. Joe Livermore followed with the best wishes of the New York crowd and amidst great applause Jack read a telegram from Mary Plummer. Ike Litchfield was favorably introduced and for over an hour held everyone breathless as he enlarged upon the good times which are to come in June. After Ike finished the class stunt was talked over and suggestions called for. The dinner was a huge success.

About one fourth of those present were either directly or indirectly engaged in war manufactures.

We are glad to announce the marriage of Howard Thomas, I, and Barbara Ellis Daniels. The ceremony was performed on December 4 at Wellesley Hills, the home of the couple. George Rooney, I, was best man.

As this number of the REVIEW is supposed to contain reminiscences the secretary can be pardoned for telling this on George. During a heated discussion in the drawing room whether dress suits or white flannels should be worn at the Senior Prom someone suggested how much better we would look in the eyes of our mothers and sisters should dress suits be worn. To which George retorted, "Why should I do that, they wouldn't recognize me then." Nevertheless George has now received his degree and is back in New York. He was not injured in the recent explosion and no matter what some people say, red hair does not have any dangerous effect on compressed air.

The engagement of Gene Place, VI, to Miss Ruth T. Prior of Woburn is announced. He is now located at Newark, N. J., in the employ of the Public Service Electrical Company.—Charlie Norton, II, has been elected secretary of the New York delegation of '15. Should anyone from '15 locate in New York be sure to look him up at 501 West 121st street.—Pep Wood, I, is with the Metropolitan Water Works. They are installing a 60-inch water main in Newton on Commonwealth avenue.—William E. Ash, IV, is in the firm of Coombs & Ash, architects and structural engineers, Lewiston, Maine.—Following is an excerpt from a letter of Frank Boynton, VI, from the Y. M. C. A., Kansas City:—

I started working the last week in June as journeyman electrician in the submarines under construction at the Fore River Shipyards in Quincy. As the boats neared completion I obtained a transfer to the drafting room of the administration department. I had been there only about four days when I succeeded in being taken in by Sloan, Huddle, Fenstal & Freeman of Madison, Wis. The work was temporary being an appraisal of the Home Telephone Company of Leavenworth, Kans. I am now in Kansas City.

The Y. M. C. A.'s are quite popular. Joe Knowles writes from the one at St. John, N. B., that the Gay White Way of Boylston and Tremont streets and Louis' Café on February 26 are as attractive as a watermelon patch would be to a coon in the Arctic.—

Raymond Gladding, XI, has received an appointment as junior engineer on the forces of the United States Engineer and has been assigned to the rivers and harbors division of the service. —From far away China, Loring Hall, I, writes:

I hardly know where to begin in relating to you what has come my way since leaving home. Sometimes it seems like one big dream, from which I shall awake to find myself looking out of the windows on Dorchester and at first I found myself wishing that it were. But as the days go by and I get deeper into my work those feelings get less and less footing, for after all, this is a pretty satisfactory sort of place in which to live, and in a great many ways, more so than America. For instance, money counts for very little in determining one's social standing or enjoyment of life and the S. O. Co. pays us enough so that we can gratify almost every whim or desire and yet have some left to get home.

When I first arrived I got the idea that one couldn't have a really good time unless he were a pretty heavy "booze buster," but I have since found out that there are nearly as many legitimate amusements as there used to be at home. There are no good theatres, of course, and even the "cinematograph" shows (as the bloody "limeys" call 'em) are punk, but I have taken up horseback riding, shooting and golf for avocations and find that all of my spare time is eliminated. A big slice, also, is taken by the study of Chinese, than which there never was a more onery lingo. Tonight my teacher told me in good Pekinese that I was learning very fast but you can always discount their statements by a large percentage, as I have found out to my cost, on occasions.

The first thing I did, after finding my way around town was to look up all the Tech men I knew of. You can take my word for it that I got one grand reception from the five more prominent ones. Three I found working for the same company as I and others were in a position to help me a lot in getting started right. There are only eight or ten, all told, in North China, but their very scarcity in numbers creates a closer bond than could possibly exist in a larger community.

The first thing they did for me was to entertain me at a tiffin in the best restaurant in town, and following that I have been invited out to dinnerparties, automobile rides, dances, and all sorts of social functions, just on the strength of my being a younger son of M. I. T. Believe me I never felt so proud of it before. The best part of it is that these M. I. T. grads occupy some of the highest positions in town and it is no empty honor to be their friend. We have a miniature alumni club, which meets regularly for tiffins, and at these times the English "limeys" have ample justification (from their point of view) to turn up their noses and say "Crazy Americans," for it is one riot of fun. At present we are negotiating with the Harvard Club, which is also small, to form a joint society of larger membership and eventually we hope to collect enough alumni societies around this nucleus to form a much-needed University Club.

At the Everett plant of the New England Structural Steel Company W. R. Lewis, IV, is production manager, Medhurst, IV, is in the tin plate shop and Waldo Pike, I, is an inspector.—Sidney Clark, II, is now located with the Gunn-Richards Company of 43 Wall street, New York City.—E. R. Brigham, IV, is in the estimating department of the Boston Metal Fireproofing Company, 8 Beacon street, Boston.

The Reunion is coming closer every day. Start saving up the pennies now, for every 1915 man should be on hand those four days in June when Boston changes from Bean Town to Tech Town. The number that were present at the class dinner demonstrates that there are enough men within a comparatively short distance of Boston to form a good nucleus. You will all hear with regard

to the 1915 dinner, stunt, etc., as soon as the arrangements are definitely made. Let's be able to sing, "Hail, hail! the gang's all here."

Address Changes

Marcus M. Anderson, 42d St. and Chester Ave., Philadelphia, Pa.—Lindsay Clark, 125 East Carrol St., Hammond, Ind.—Carl T. Dunn, 364 Mansfield St., New Haven, Conn.—George S. Fowler, care of State Department of Agriculture, Atlanta, Ga.—Francis Hann, 55 Congress St., Boston, Mass.—Stephen R. Holmes, 220 Golden Gate Ave., San Francisco, Cal.—Peter Hooper, 490 Columbus Rd., Dorchester, Mass.—Franklin L. Myrick, 163 Summer St., Somerville, Mass.—James B. Neal, Union Village, Woonsocket, R. I.—James P. Nowlin, Sabine Smokeless Coal Co., Otsego, W. Va.—Homer Rogers, 901 Gilpin Ave., Wilmington, Del.—William J. Rooney, 1215 West St., Wilmington, Del.—Solomon Schneider, Box 970, Richmond, Va.—Alfred H. Schoellkopf, P. O. Box 57, Buffalo, N. Y.—Edward H. Stelle, 260 Gates Ave., Brooklyn, N. Y.—Frederick W. Stetson, Riverside Club, Penns Grove, N. J.—George W. Stewart, 1430 Third Ave., Columbus, Ga.—Malcolm Thomas, 22 Monument Ave., Swampscott, Mass.—Kebe Toabe, M. I. T., Boston, Mass.—McCeney Werlich, care of Reggs National Bank, Washington, D. C.—Sanford L. Willis, Eustis Mining Company, Eustis, Quebec.

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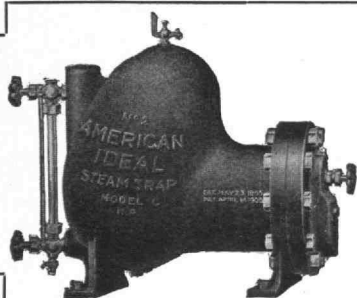
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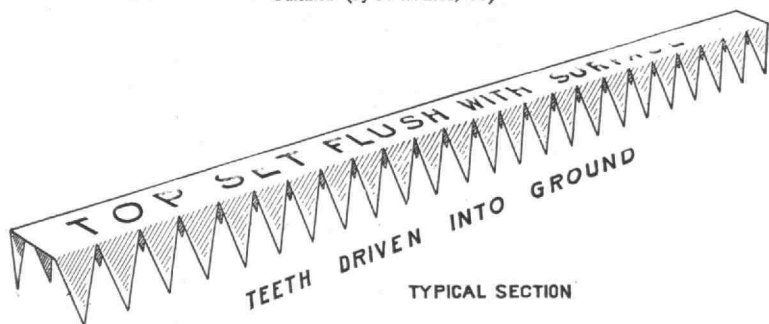
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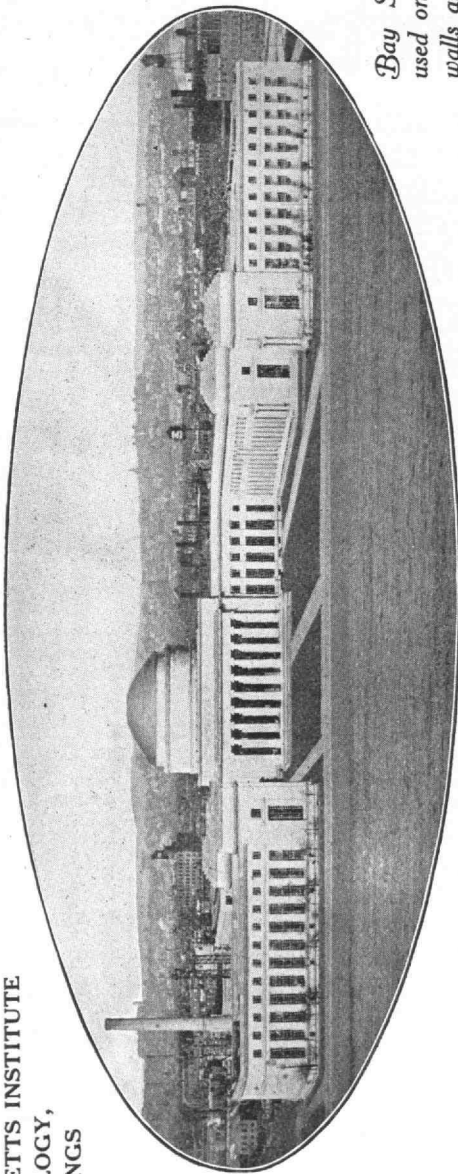
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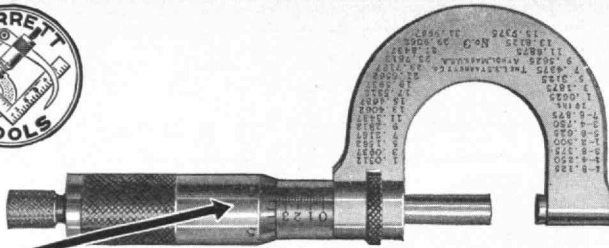
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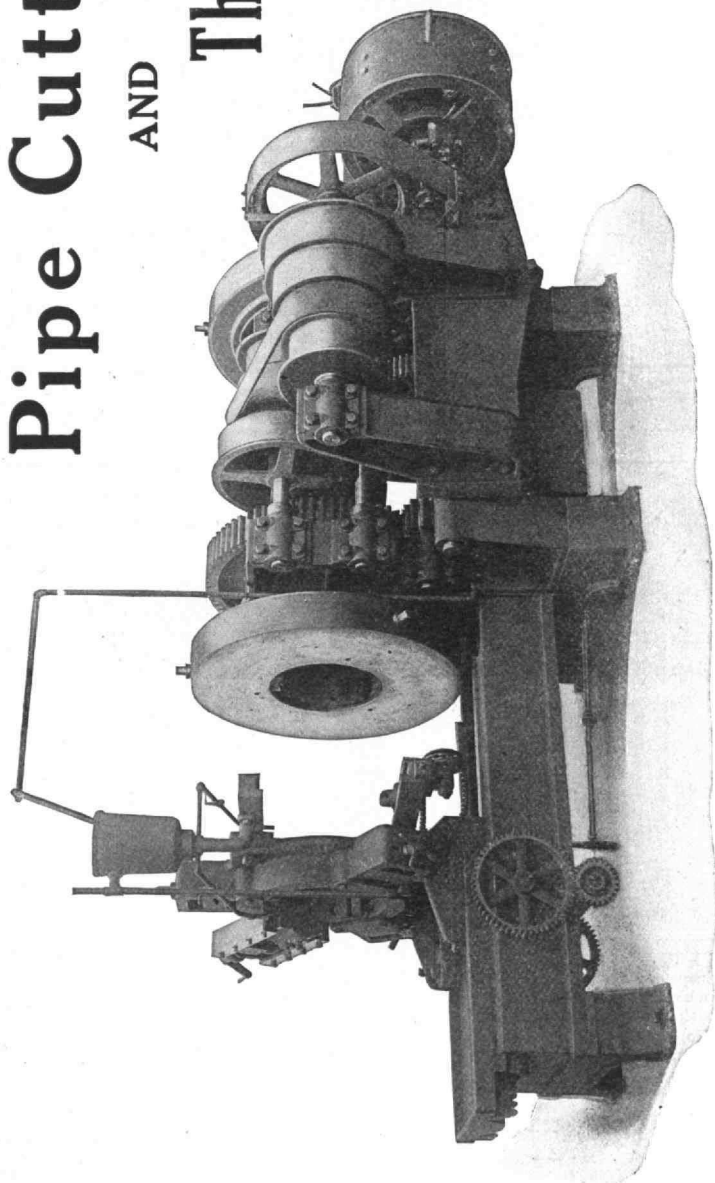
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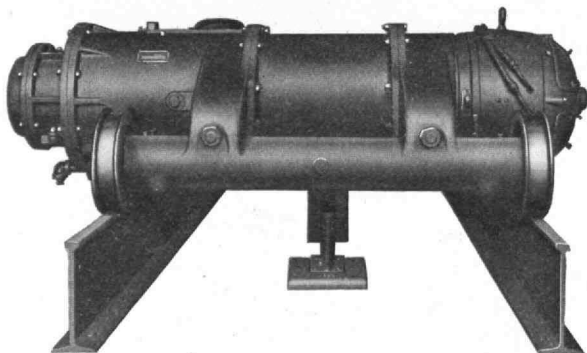
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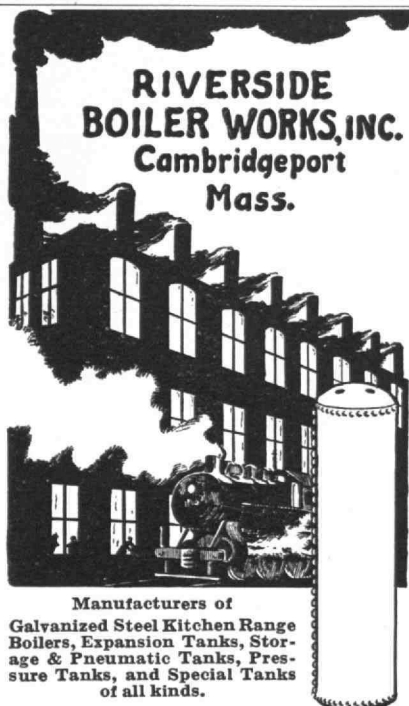
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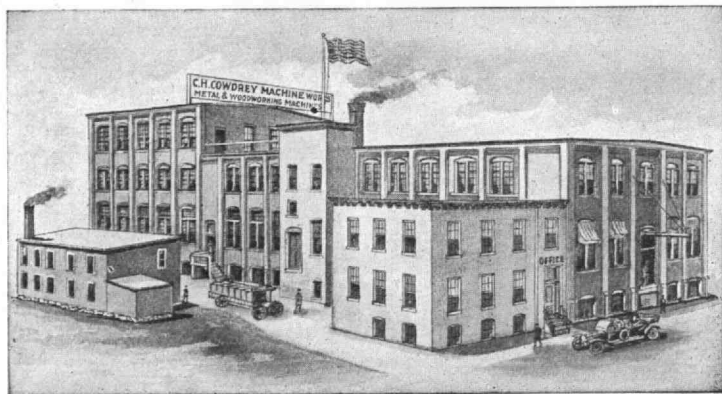
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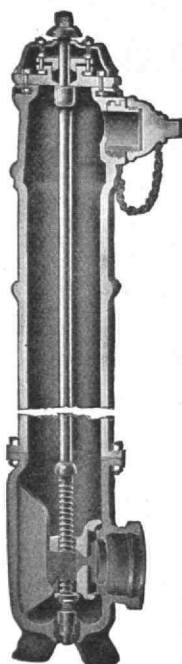
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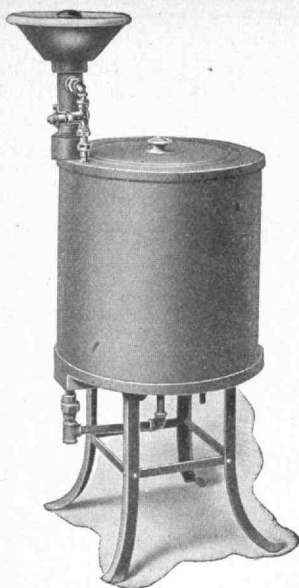
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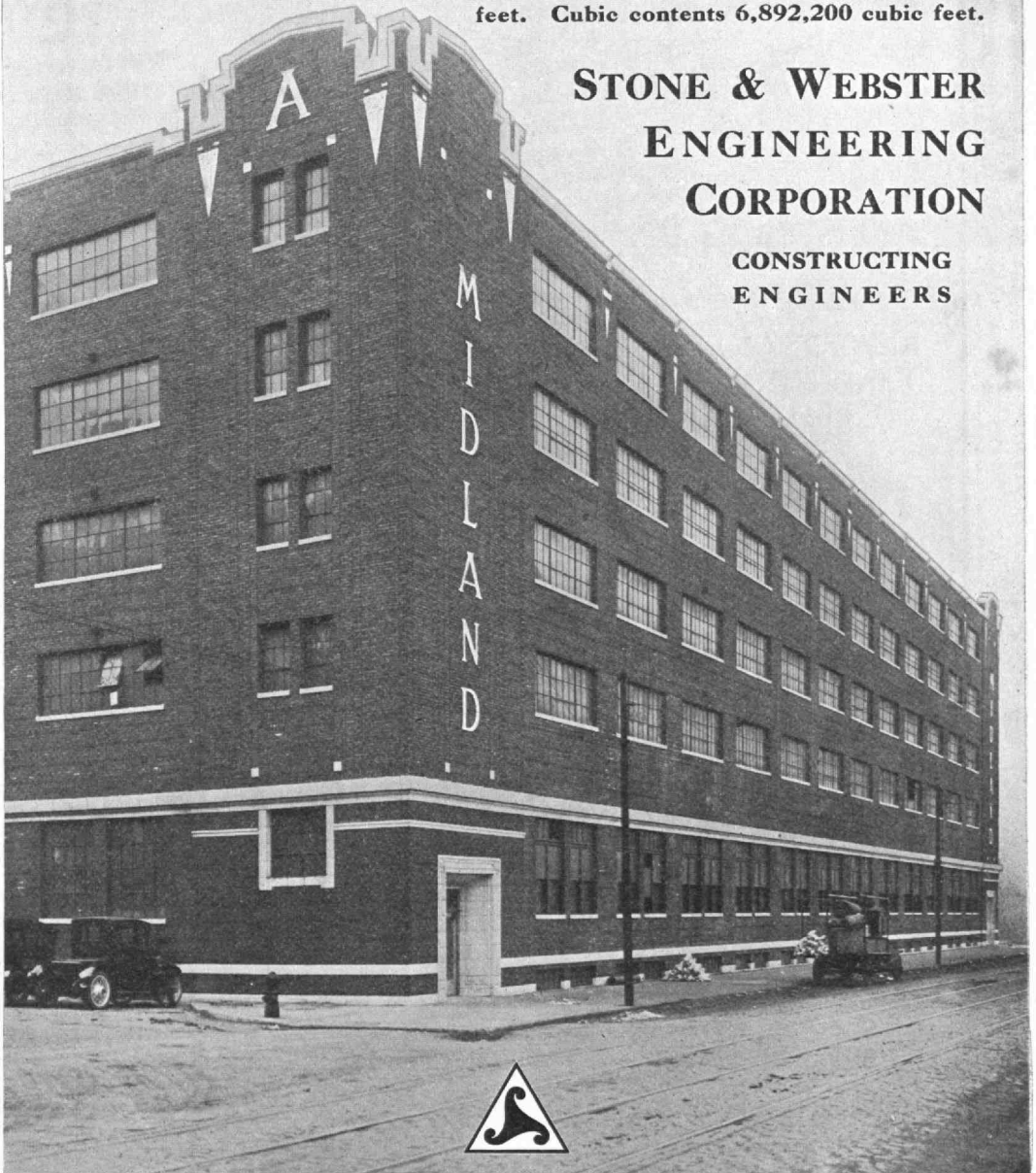
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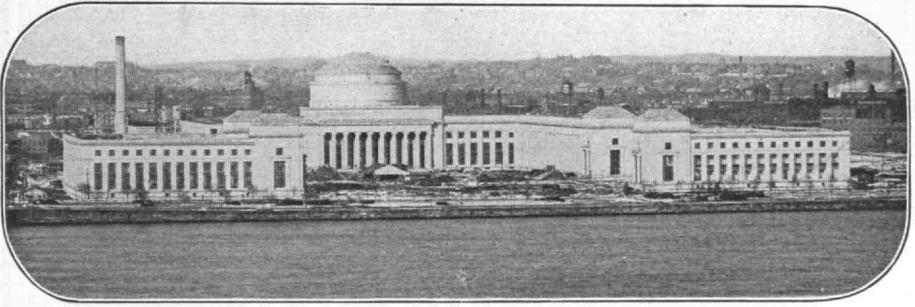
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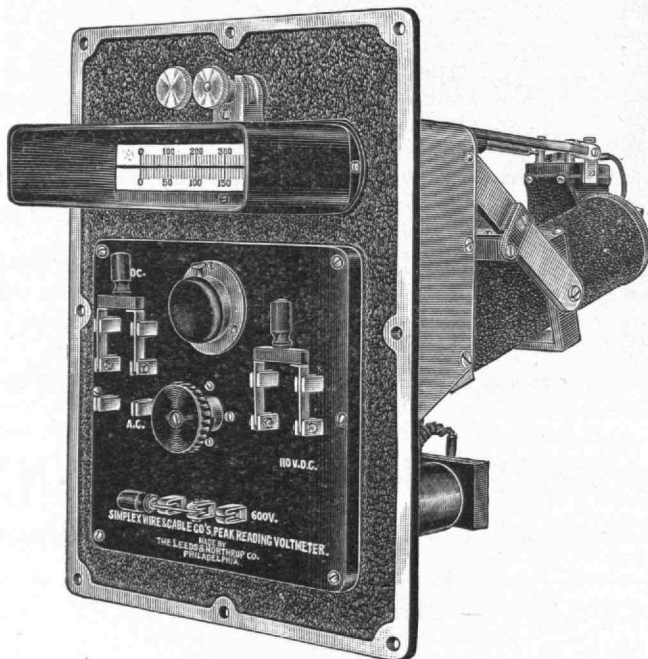
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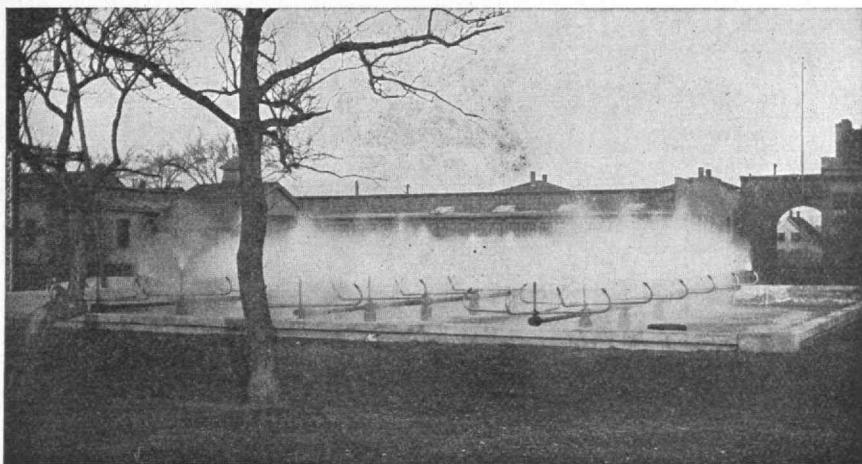
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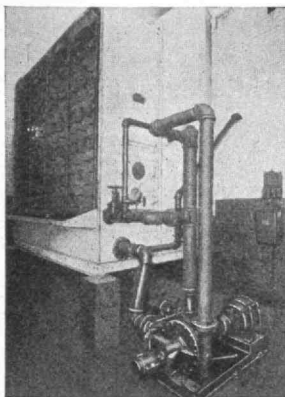
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93 Federal Street, Boston, Mass.

74-14

YOU have a right to expect of your advertising agency a thorough knowledge of your product and your selling field—knowledge of dealers' and jobbers' requirements, preferences and foibles—knowledge of the consumers' various angles.

Knowledge of this sort means more and bigger sales for you—and sales-performance is the real test of an agency's ability.

This organization has chosen to concentrate its technical knowledge upon the marketing of engineering products; machinery in general, automobiles and sundries, agricultural, engineering and building supplies and kindred materials; and offers to manufacturers in these fields a comprehensive service.

It is equipped to serve as your publicity department and attend to all details of advertising, booklet and catalogue preparation, circularizing to carefully maintained lists, etc., or to act merely as your advertising agency in coöperation with your own publicity department.

WALTER B. SNOW AND STAFF

136 Federal Street

Boston, Mass.

EFFICIENCY DURABILITY DEPENDABILITY

are the proven characteristics of "BUFLOKAST" Chemical Plants and "BUFLOVAK" Vacuum Dryers. That's why we are constantly replacing other apparatus with "BUFLOKAST" and "BUFLOVAK" apparatus.

Our apparatus embodies the highest attainment in engineering skill; sound practice; every feature that years of experience have shown necessary.

"BUFLOKAST" includes the design, construction and operation under guarantee (if desired) of Chemical Apparatus and complete plants for producing Acids, Chemicals, Dyes, Caustic Soda, etc., including Aniline, Phenol, Beta Naphthol, Picric Acid, and kindred organic materials.

"BUFLOVAK" Dryers have won their commanding position in the vacuum drying field through exclusive features in design and construction. Years of successful experience assure you of the best vacuum dryer that can be built.

We build vacuum dryers for all materials.

Let us assist you in your drying problem.



BUFFALO FOUNDRY & MACHINE CO.

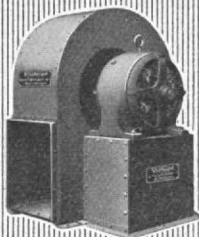
60 WINCHESTER AVENUE

BUFFALO, N. Y.

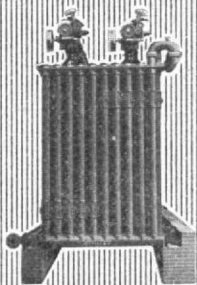
NEW YORK OFFICE: 17 BATTERY PLACE

Sturtevant

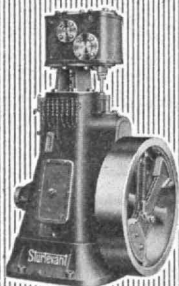
REG. U. S. PAT. OFF.



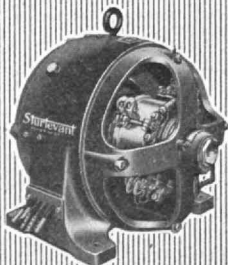
Fans



Economizers



Engines



Motors

THE GROWTH OF A GREAT INDUSTRY

Back in the early sixties our business in fans and blowers was firmly established, but no suitable drivers were available—no engine of the period came up to requirements. Accordingly there was developed a complete line of steam engines—sturdy, well-designed and perfectly lubricated. These engines found early application in naval service where requirements are exceedingly severe. The fact that they proved so successful is a sufficient guarantee of their excellency. Later, motors and turbines were developed as high speed fans came into general use.

We thus have a complete line of fans and prime movers and can deal efficiently with all air-handling problems—no matter what the conditions of speed, or pressure.

The design of all our prime movers, engines, turbines, and motors have been worked out with special reference to their application to fans and blowers. For such service they are unquestionably superior.

The addition of fuel economizers to our line of power apparatus enables us to render complete and efficient service in power-house economy.

Bulletins are published on all our apparatus.
Copies sent on request.

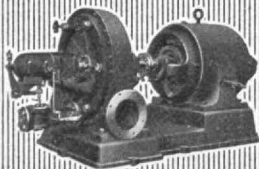
B. F. STURTEVANT COMPANY

HYDE PARK, BOSTON - MASSACHUSETTS

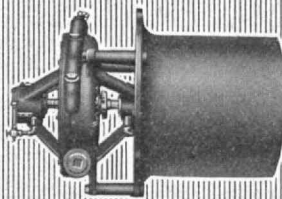
And All Principal Cities of the World

Selling Agents for Sanford Riley Stoker Co.
Limited

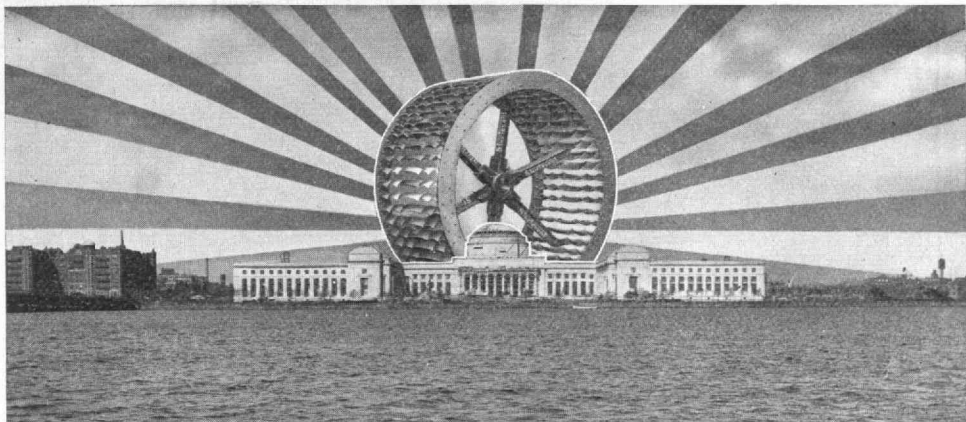
"THE RILEY STOKER"



Turbo Generator



Turbo-Undergrate Blower



New Buildings, Massachusetts Institute of Technology. Photograph from opposite side of Charles River. Architect William Welles Bosworth, New York. Consulting, Heating and Ventilating Engineers, French & Hubbard, Boston. Engineers and Contractors, Stone & Webster Engineering Corp., Boston. Consulting Engineer on Footings, Charles T. Main. Consulting Engineer on Structural Steel, Sanford E. Thompson.

Massachusetts Institute of Technology

A better day dawns for M. I. T. as the new ten million dollar plant fast nears completion. It will be ready for occupancy next fall.

115 STURTEVANT FANS driven by STURTEVANT MOTORS

Supply and exhaust more than 800,000 cubic feet of air per minute for heating and ventilating.

400,000 lbs. of galvanized iron heating and ventilating ducts have been manufactured and installed by the B. F. Sturtevant company in addition to 45,000 sq. ft. of non-corrosive asbestos-covered ducts for chemical laboratory exhaust.

The power station of 2,000-horse power capacity also being built has Riley Underfeed Stokers and Sturtevant Turboline Forced Draft Fans driven by Sturtevant Turbines.

M. I. T. is an acknowledged authority in matters mechanical and the adoption of Sturtevant apparatus proves their faith in the goods and their confidence in the firm.

Send for catalogs and further information on fans for heating and ventilating, mechanical draft, drying, cooling and conveying.

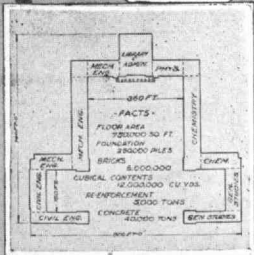
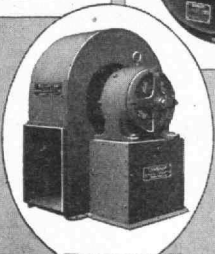
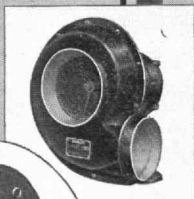
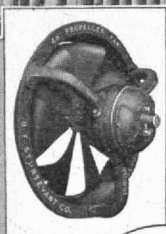
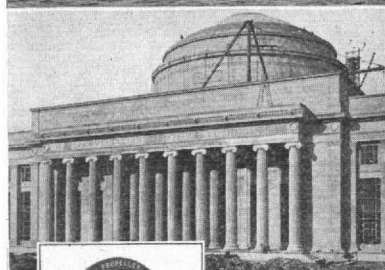
B. F. STURTEVANT COMPANY

HYDE PARK, BOSTON, MASSACHUSETTS
and all principal cities of the world.

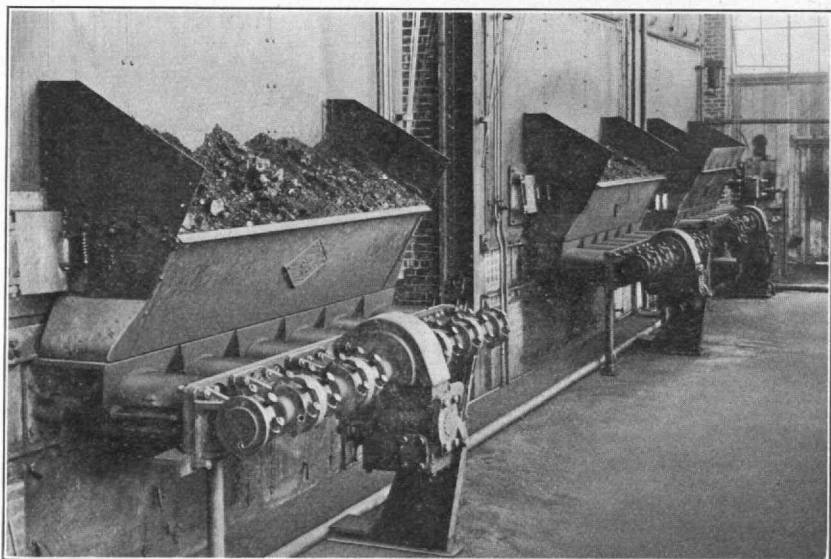
Selling Agents: Sanford Riley Stoker Co., Limited
"THE RILEY STOKER"

Sturtevant

(REG. U. S. PAT. OFF.)



RILEY UNDERFEED STOKERS

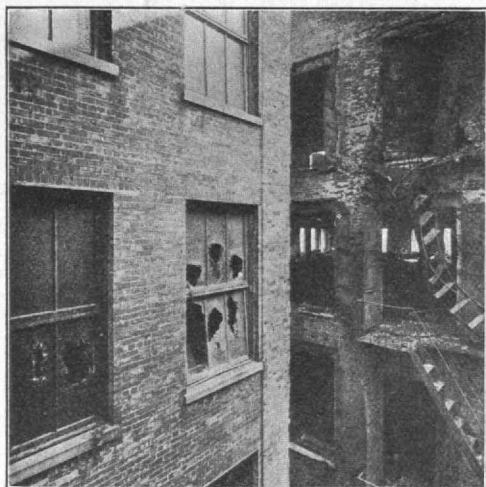


See the RILEY UNDERFEED STOKERS
in operation at the Technology power
house.

They were the only stokers considered
for this installation.

SANFORD RILEY STOKER CO., LTD.
WORCESTER, MASS.

Sales inquiries direct to home office, Worcester,
or branch offices of B. F. Sturtevant Co., Sales
Agents. British Licensees, Erith's Engineering
Co., Ltd., London.



Asch Building Fire showing adjacent building protected by metal frames and "Wire Glass" from behind which the firemen fought the fire by poking hose nozzles through the Wire Glass

"Make it Fire-proof and get the Maximum of Natural Light" are two of the most important instructions when preparing to erect office building, factory, mill, warehouse or any type of commercial building.

MISSISSIPPI WIRE GLASS

set in approved metal frames forms the most practical form of constant fire protection. It is made in various patterns for the purpose of diffusing the light so that the light in a room 30 feet or more deep may be increased from 3 to 15 times its present effect by using certain patterns instead of common window glass.

Before writing specifications write us and let us send you our catalogue, samples and the Report of the Insurance Engineering Experiment Station on "Diffusion of Light," for which there is no charge. Look carefully into the merits of WIRE GLASS, then be your own judge as to whether you want proper protection and an abundance of light or not.

MISSISSIPPI WIRE GLASS CO.

7 W. Madison St.
Chicago

220 Fifth Avenue
New York

4070 N. Main St.
St. Louis

Barrett Specification Roofs



On a Great Group of Concrete Buildings—

THE huge plant of the Robert Gair Company in Brooklyn includes four enormous structures of reinforced concrete and two old brick buildings.

One of these is the highest reinforced concrete building in the world and the group as a whole is the biggest single group of reinforced concrete buildings ever erected for one concern.

All the buildings, old and new, have The Barrett Specification type of roof.

The reasons for choosing these roofs were a desire to secure the best results at the lowest unit cost.

Just as the reinforced concrete walls take care of themselves and involve no maintenance expenses, so The Barrett Specification Roofs cost less to construct than

any other permanent roof covering and require no care or attention.

The Turner Construction Company, which built these reinforced concrete buildings, has constructed hundreds of other such structures throughout the country, and The Barrett Specification type of roof covers at least 95% of all the buildings they have erected.

Engineers, architects and builders know the sound economies of Barrett Specification Roof construction and usually prefer such roofs to any other kind.

Barrett Specification Roofs take the base rate of insurance and are approved by the Underwriters' Laboratories.

Copy of the Barrett Specification, with roofing diagrams, will be sent free on request. Address our nearest office.

*Barrett Specification Roofs on the
Robert Gair Buildings, Brooklyn, N. Y.
Architect: William Higginson,
13 Park Row, New York City.
Gen. Contractors: Turner Construction Co.,
11 Broadway, New York City.*

The *Barrett* Company

New York Chicago Philadelphia Boston St. Louis
Detroit Birmingham Kansas City Minneapolis
THE PATERSON MANUFACTURING COMPANY, Limited: Montreal
St. John, N. B. Halifax, N. S.

Cleveland Cincinnati Pittsburgh
Salt Lake City Seattle Peoria
Toronto Winnipeg Vancouver
Sydney, N. S.



NORTHROP

TRADE-MARK REGISTERED

LOOMS

Fix selling prices of goods

Raise Standard of quality

Increase product per loom

Reduce cost of weaving 50 to 75 per cent.

Increase efficiency of weavers

Increase wages of weavers

DRAPER COMPANY

HOPEDALE MASS.

J. D. CLOUDMAN Southern Agent 188 So. Forsyth St.
ATLANTA GA.

“Old Colony Service”

AN efficient and courteous organization, progressive methods, large resources and three offices, conveniently located in different sections of Boston, combine to make the Old Colony Trust Company the most desirable depository in New England.

Interest-bearing accounts, subject to check, may be opened at any office and the three offices used interchangeably for the transaction of your banking business.

An investment department that is at all times in close contact with the bond market and financial affairs in general is at your disposal.

Modern safe deposit vaults at all offices, that offer complete protection for your valuables.

Old Colony Trust Company

52 TEMPLE PLACE 17 COURT STREET 222 BOYLSTON ST.
BOSTON
